GODDARD SPACE FLIGHT CENTER
Greenbelt, MD 20771-0001
DELIVERY ORDER

P.O. NO.: S-65836-G
CALL NO.:
DATE: 09/24/2002
TOTAL COMMIT: $3,000,000.00

DELIVERY SCHEDULE: 09/30/2003 F.O.B. POINT: DESTINATION
DISCOUNT TERMS: NET 30 CONTRACT NO.: NAS5-98145 PPC: BX B/NC: 988

ACCOUNTING DATA: OBJECT CLASS 2529

PCN	JON	APPROP	PR DATE	FUNDS	BLI	PC	AMOUNT
201-84154	200-992-88-01-88	802/30110(02)	09/06/2002	DIRECT	A5-01	1C	3,000,000.00

	NAME	CODE	PHONE
INITIATOR	SHERRIE WOOD	201.0	68991
TECHNICAL REP	BOB FREITAS	290.0	68461
RESOURCE REP	SHERRIE WOOD	201.0	68991
ACCEPTANCE BY			

SUGGESTED SOURCE: INTELLISOURCE/ACS

DELIVER TO: SHERRIE WOOD
Code 201.0
RECEIVING AND INSPECTION
BLDG. 16W, CODE 239
Bldg. 12 Room C112
GREENBELT, MD 20771

SUGGESTED DELIVERY DATE: 06/21/2002

ACCEPTANCE WILL BE MADE WITHIN 7 CAL/DAYS AFTER DELIVERY

REQUIRED APPROVALS	SPECIAL APPROVALS
ACI KING 201.0 09/10/2002	

ITEM	SUPPLIES AND OR SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
1	THIS DELIVERY ORDER IS FOR COMPREHENSIVE DESKTOP COMPUTER SERVICES, SERVER SERVICES, AND INTRA-CENTER COMMUNICATION SERVICES FOR THE GODDARD SPACE FLIGHT CENTER (GSFC) INCLUDING THE WALLOPS FLIGHT FACILITY (WFF) AND GISS COVERED IN THE ODIN CONTRACT. ADDITIONAL TERMS AND ATTACHMENTS TO THIS DELIVERY ORDER ARE ENCLOSED. SEE ATTACHED FOR ADDITIONAL TERMS SEE ATTACHED FOR ADDITIONAL TERMS	1	EA.	$3,000,000.00	$3,000,000.00

CERTIFIED FOR DEFENSE USE DPAS (15 CRF 350) DOC9 TOTAL $3,000,000.00

CONTRACTOR:
ACS GOVERNMENT SOLUTIONS GROUP
ATTN: SHARENE FRANCIS
ONE CURIE COURT
ROCKVILLE MD 20850

CONTRACTING OFFICER:
DORIS S WOOD
Doris Wood 9/25/02
Signature Date

GODDARD SPACE FLIGHT CENTER
Greenbelt, MD 20771-0001
ADDITIONAL TERMS

S-65836-G

NO CHANGES ARE TO BE MADE TO THIS PURCHASE ORDER WITHOUT THE PROPER AUTHORIZATION FROM GSFC PROCUREMENT.

CONTRACTUAL INQUIRIES SHOULD BE DIRECTED TO BENJAMIN HALL CODE 210.M, GSFC, GREENBELT, MD 20771, PHONE (301)286-3462 OR FAX 301-286-1654, behall@pop200.gsfc.nasa.gov

NPS CLAUSE 18-52.225-70, EXPORT LICENSES (FEB 2000) IS INCORPORATED BY REFERENCE. INSERT 'ANY GOVERNMENT INSTALLATION' IN PARAGRAPH (5).

PERIOD OF PERFORMANCE:10/01/02 THRU 09/30/03.
ROBERT FREITAS CODE 290. AT 301-286-5461 IS THE DESIGNATED REPRESENTATIVE OF THE CONTRACTING OFFICER. THE REPRESENTATIVE'S AUTHORITY IS LIMITED TO THE DUTIES SPECIFIED IN THE ATTACHED APPOINTMENT.

EQUIPMENT/SOFTWARE USER: SHERRIE WOOD, CODE 201.0, PHONE 301-286-8991.

This delivery order is for comprehensive desktop computer services, server services, and intra-center communication services for the Goddard Space Flight Center (GSFC) including the Wallops Flight Facility (WFF) and GISS covered in the ODIN contract. Additional terms and attachments to this Delivery Order are enclosed.

1. PERIOD OF PERFORMANCE

The period of performance for this delivery order is for a 1-year base period from October 1, 2002 through September 30, 2003 with one 6-month option period from October 1, 2003 through March 31, 2004.

2. QUANTITIES ORDERED

The total quantities ordered under this delivery order are contained in the On-Line Delivery Order (ODO) dated September 30, 2002, and is priced in accordance with Attachment A to this document. The ODO is incorporated by reference.

3. DELIVERY ORDER VALUE

The total not-to-exceed value of this delivery order is as follows:

Base Price: $14,958,014
Option Price: 7,544,570
Total IDIQ $22,502,584

4. CUSTOMER SATISIFCATION

The Customer Satisfaction Metric is 90%.

5. ASSET TRANSITION

The asset transition value shall be negotiated within 30 days of the delivery order effective date.

6. RETURN TO SERVICE

The Return to Service surcharge is $348. This is a fixed amount for the Restore to Baseline configuration in accordance with Section C.5.5.3 of the Master Contract.

7. SECURITY UPLIFT

In accordance with Master Contract Section A.1.15 and C.5.9.6, the contractor shall uplift any seat to a classified (Secure) level. The surcharge for this requirement will be negotiated when the need has been identified and defined by the Government.

8. SERVER FILE SPACE

Server file space per user shall be defined as 100 Megabytes per user as referenced in Master Contract section E.3.1.15.

TECHNICAL REPRESENTATIVE

The Delivery Order Contracting Officer's Technical Representative (DOCOTR) is Robert Freitas, Code 290, at 301-286-8461.

10. CRITICAL ESCALATION PRICE

C.5.9.4.2 of Contract NAS5-98145 allows for up to 1% of all problem calls to be escalated to priority service in accordance with the established procedure. If the Government exceeds the allotted amount, the Government agrees to pay $125 per incident. The Contractor shall include these charges on the monthly invoice, charged to the appropriate Division.

11. MINIMUM SERVICE LEVELS

The minimum service levels for the GP2, GP3, and SE1 seat are as follows:

- Hardware maintenance
- System Software maintenance
- ODIN Application Software
- ODIN Application Software maintenance

The minimum service levels for the SE2 and SE3 seats are as follows:

- Hardware maintenance
- System Software maintenance

In addition, the optional service levels with each of these services must be selected in a consistent manner (e.g., a GP1 user selects the Premium service level for each of the four services.)

However, there may be circumstances where a user's requirements may dictate that the user needs to opt out of some or all of these services. A waiver request will be initiated if a mutual agreement can not be negotiated with the Contractor, the DOCOTR, and the user.

12. STORAGE VOLUME

Service Description: Provide server storage space on ODIN provided server.

Service Levels	Typical Service Characteristic
None	No server space
Basic	50 MB of server space
Regular	500 MB of server space
Premium	5 GB of server space
Enhanced	25 GB of server space
Enhanced Plus	50 GB of server space

13. PCELL SEAT

The monthly price for the cell phone is $60. The standard features are as follows:

Call waiting
Caller ID
Call detail
Three-way calling
Voice mail
500 minutes a month within the Sprint PCS network including roaming
Restore to Service: Regular
Voice mail
Overage Fee: $0.45/minute over 500 minutes/month
Roaming Fee: $0.45/minute

Accessories and replacement batteries will be available via the catalog

Hardware will meet or exceed current specifications.

14. LIMITATION OF FUNDS (FIXED-PRICE CONTRACT)

Not withstanding the requirements of Contract NAS5-98145, the following additional clause is modified and incorporated into this Delivery order:

1852.232-77 Limitation of Funds (Fixed- Price Contract) (March 1989)

(a) Of the total price of **services offered**, the sum of $3,000,000 is presently available for payment and allotted to this contract. It is anticipated that from time to time additional funds will be allocated to the contract in accordance with the following schedule, until the total price of said **services** is allotted:

SCHEDULE FOR ALLOTMENT OF FUNDS

Date	Amounts
TBD	**TBD**

(b) The Contractor agrees to perform or have performed work on the items specified in paragraph (a) of this clause up to the point at which, if this contract is terminated pursuant to the Termination for Convenience of the Government clause of this contract, the total amount payable by the Government (including amounts payable for subcontracts and settlement costs) pursuant to paragraphs (f) and (g) of that clause would, in the exercise of reasonable judgment by the Contractor, approximate the total amount at the time allotted to the contract. The Contractor is not obligated to continue performance of the work beyond that point. The Government is not obligated in any event to pay or reimburse the Contractor more than the amount from time to time allotted to the contract, anything to the contrary in the Termination for Convenience of the Government clause notwithstanding.

(c)(1) It is contemplated that funds presently allotted to this contract will cover the work to be performed until **January 5, 2003**.

(2) If funds allotted are considered by the Contractor to be inadequate to cover the work to be performed until that date, or an agreed date substituted for it, the Contractor shall notify the Contracting Officer in writing when within the next 60 days the work will reach a point at which, if the contract is terminated pursuant to the Termination for Convenience of the Government clause of this contract, the total amount payable by the Government (including amounts payable for subcontracts and settlement costs) pursuant to paragraphs (f) and (g) of that clause will approximate 75 percent of the total amount then allotted to the contract.

(3) (i) The notice shall state the estimate when the point referred to in paragraph (c)(2) of this clause will be reached and the estimated amount of additional funds required to continue performance to the date specified in paragraph (c)(1) of this clause, or an agreed date substituted for it.

(ii)The Contractor shall, 60 days in advance of the date specified in paragraph (c)(1) of this clause, or an agreed date substituted for it, advise the Contracting Officer in writing as to the estimated amount of additional funds required for the timely performance of the contract for a further period as may be specified in the contract or otherwise agreed to by the parties.

') If, after the notification referred to in paragraph (c)(3)(ii) of this clause, additional funds are not allotted the date specified in paragraph (c)(1) of this clause, or an agreed date substituted for it, the Contracting Officer shall, upon the Contractor's written request, terminate this contract on that date or on

the date set forth in the request, whichever is later, pursuant to the Termination for Convenience of the Government clause.

(d) When additional funds are allotted from time to time for continued performance of the work under this contract, the parties shall agree on the applicable period of contract performance to be covered by these funds. The provisions of paragraphs (b) and (c) of this clause shall apply to these additional allotted funds and the substituted date pertaining to them, and the contract shall be modified accordingly.

(e) If, solely by reason of the Government's failure to allot additional funds in amounts sufficient for the timely performance of this contract, the Contractor incurs additional costs or is delayed in the performance of the work under this contract, and if additional funds are allotted, an equitable adjustment shall be made in the price or prices (including appropriate target, billing, and ceiling prices where applicable) of the items to be delivered, or in the time of delivery, or both.

(f) The Government may at any time before termination, and, with the consent of the Contractor, after notice of termination, allot additional funds for this contract.

(g) The provisions of this clause with respect to termination shall in no way be deemed to limit the rights of the Government under the default clause of this contract. The provisions of this Limitation of Funds clause are limited to the work on and allotment of funds for the items set forth in paragraph (a) of this clause. This clause shall become inoperative upon the allotment of funds for the total price of said work except for rights and obligations then existing under this clause.

(h) Nothing in this clause shall affect the right of the Government to terminate this contract pursuant to the Termination for Convenience of the Government clause of this contract.

(End of clause)

15. Not withstanding the requirements of Contract NAS5-98145, the following additional FAR and NFS clauses are incorporated into this Delivery order by reference. These clauses are modified where required to reflect the following changes or fill-ins:

16a) 1852.245-71 INSTALLATION – ACCOUNTABLE GOVERNMENT PROPERTY (June 1998) Alternate I (March 1989)

- Contract Section A.1.14 identifies the Contractor user responsibilities for paragraph (a) of clause 1852.245-71

16b) 1852.245-73 FINANCIAL REPORTING OF NASA PROPERTY IN THE CUSTODY OF CONTRACTORS (August 2001)

16c) 1852.245-77 LIST OF INSTALLATION – ACCOUNTABLE PROPERTY AND SERVICES (July 1997)

- Paragraph (b) (1) of clause 1852.245-77 is modified to include the List of Installation –Accountable Government Property in Attachment C.

- The property or services identified in paragraphs (c) and (j) of clause 1852.245-77 are not authorized under this delivery order.

16d) 1852.215-85 OMBUDSMAN (JUNE 2000) Alternate 1 (JUNE 2000) is incorporated by reference with the following fill-in at paragraph B, William Townsend, NASA/GSFC, Code 100, Bldg. 8, Rm. 600,

Greenbelt Road, Greenbelt, MD, 20771, Phone:(301) 286-5066, Facsimile (301) 286-1714, Email Address: William.F.Townsend.1@gsfc.nasa.gov

16e) 1852.204-74 CENTRAL CONTRACTOR REGISTRATION (AUGUST 2000) is incorporated by reference.

16f) 1852.223-70 SAFETY AND HEALTH (MAY 2001) is incorporated by reference.

16g) 1852.223-75 MAJOR BREACH OF SAFETY OR SECURITY (MAY 2001)

16h) 1852.242-72 Observance of Legal Holidays (AUGUST 1992)

17. Not withstanding the requirements of Contract NAS5-98145, the following GSFC clauses are incorporated into this Delivery Order:

18a) GSFC 52.211-95 GOVERNMENT PREMISES--COMPLIANCE WITH PROCEDURES (NOV 1999)

(a) Compliance with procedures. While on Government premises, the Contractor shall comply with established requirements governing the conduct of personnel and the operation of the facility. These requirements are set forth in NASA-wide or local installation management instructions, handbooks, or announcements. The following cover many of the requirements that must be met by Contractors utilizing GSFC facilities:

GMI 1040.5	GSFC Emergency Management Program
GMI 1040.6	GSFC Emergency Management Plan
GMI 1152.9	Facilities Coordination Committee
GHB 1600.1	Security Manual
GMI 1700.2	GSFC Health and Safety Program
GMI 1772.1	Center Smoking Policy
GMI 1780.1	GSFC Confined Space Policy
GHB 1790.1	Chemical Hygiene Plan
GMI 2540.2	Administrative Communications, Facilities, Equipment and Services
GHB 8800.2	GSFC Environmental Handbook
GMI 8840.1	Center Paper Recycling Program

Center Announcement No. 90-59--Contractor Business Use of Official Mail and of the Mail Services Center.

Copies of the current issuances may be obtained at <http://gdms.gsfc.nasa.gov/gdms/plsql/menu_guest> or from the Contracting Officer. The above list may be modified by the Contracting Officer to include additional issuances pertaining to the conduct of personnel and the operation of the facility.

(b) Telephone usage certification. If the installation provided property and services listed in NASA FAR Supplement clause 1852.245-77 includes the use of telephones, the Contractor shall provide an annual certification that all such usage was in accordance with GHB 2540.2, "GSFC Administrative Communications Facilities, Equipment and Services". This certification shall be made in January of each year covering the preceding calendar year and at the conclusion of the Contractor's efforts onsite at the GSFC. The certification shall be submitted to the Contracting Officer with a copy to the Customer Interface Branch, Code 294.

(End of clause)

18b) GSFC 52.203-91 LIMITED RELEASE OF CONTRACTOR CONFIDENTIAL BUSINESS INFORMATION

(a) NASA may find it necessary to release information submitted by the Contractor, either in response to this solicitation or pursuant to the provisions of this contract, to individuals not employed by NASA. Business information that would ordinarily be entitled to confidential treatment may be included in the information released to these individuals. Accordingly, by submission of this proposal, or signature on this contract or other contracts, the Contractor hereby consents to a limited release of its confidential business information (CBI).

(b) Possible circumstances where the Agency may release the Contractor's CBI include, but are not limited to, the following:

(1) To other Agency Contractors and subcontractors, and their employees tasked with assisting the Agency in handling and processing information and documents in the evaluation, the award or the administration of Agency contracts, such as providing both preaward and post award audit support and specialized technical support to NASA's technical evaluation panels;

(2) To NASA Contractors and subcontractors, and their employees engaged in information systems analysis, development, operation, and maintenance, including performing data processing and management functions for the Agency.

(c) Except where otherwise provided by law, NASA will permit the limited release of CBI under subparagraphs (1) or (2) only pursuant to non-disclosure agreements signed by the assisting Contractor or subcontractor, and their individual employees who may require access to the CBI to perform the assisting contract).

(d) NASA's responsibilities under the Freedom of Information Act are not affected by this clause.

(e) The Contractor agrees to include this clause, including this paragraph (e), in all subcontracts at all levels awarded pursuant to this contract that require the furnishing of confidential business information by the subcontractor.

(End of clause)

18c) GSFC 52.204-99 ONSITE PERSONNEL--REPORTING REQUIREMENTS AND CHECKOUT PROCEDURES (SEPT 1999)

(a)LISTS. The Goddard Space Flight Center maintains a Locator and Information Services Tracking System (LISTS). The LISTS contains work and home location and contact information for personnel located onsite for a planned period of more than six months and for all personnel that have permanent NASA/GSFC Identification Badges, regardless of duty location.

(b) Form 24-27. The Contractor must complete and submit a GSFC Form 24-27, "LISTS Data and Badge and Decal Information" for each employee that meets the conditions in paragraph (a) of this clause. The instructions for completing the form are contained in GSFC Form 24-27a. These forms are available from GSFC stores stock. The GSFC Form 24-27 shall be submitted to the Delivery Order Contracting Officer's Technical Representative (DOCOTR). The DOCOTR will review the form(s) for accuracy and completeness and resolve any housing or access issues and return the approved form to the Contractor. The Contractor shall forward the approved form(s) to the GSFC Security Branch, Code 205.1, for data entry into the LISTS and to obtain appropriate badge(s) for the Contractor employee(s).

The Contractor may contact the LISTS Manager, Institutional Support Office, Code 201, 301-286-2306, for assistance regarding the LIST System.

(c) Monthly report. The Contractor shall submit a monthly annotated LISTS Report. The GSFC LISTS Manager, Code 201, will furnish a LISTS print-out to the Contractor no later than the end of each month. The Contractor shall annotate this provided report to correct and update the information. This shall include a "mark out" of those employees who are no longer employed by the Contractor or no longer meet the conditions of paragraph (a) of this clause. Any additional employees that meet the conditions in paragraph (a) shall be entered on the report, including the date the GSFC Form 24-27 for each such employee was submitted to the GSFC Security Branch. The annotated LISTS Report shall be submitted to the DOCOTR, the GSFC Security Branch, Code 205.1, and to the LISTS Manager, Code 201, by the 10th calendar day of the month.

(d) Checkout Procedures. The Contractor shall ensure that all Contractor personnel that have NASA/GSFC issued identification, keys or other property that leave its employ or that no longer will be working onsite, process out through the GSFC Security Branch, Code 205.1 and return all such property.

If not accomplished by the employee, the Contractor shall take action to ensure its accomplishment no later than 30 days after the employee's departure.

(End of clause)

19. Clause 52.222-37 EMPLOYMENT REPORTS ON DISABLED VETERANS AND VETERANS OF THE VIETNAM ERA (JAN 1999) is also incorporated by reference.

20. EIT ACCESSIBILITY STANDARDS

This delivery order requires that applicable Electronic and Information Technology can be accessed and used by people with disabilities in accordance with Section 508 of the Rehabilitation Act of 1973 (29 U.S.C. 794d), and the Architectural and Transportation Barriers Compliance Board Electronic and Information Technology (EIT) Accessibility Standards (36 CFR part 1194), unless an exception under these regulations apply.

21. Property Management Clause

a) The Contractor shall notify the appropriate property custodian when Government-owned equipment is replaced with ODIN-owned equipment; is moved to a new location; or is removed for maintenance or repairs.

b) The Contractor is not required to track Government-owned equipment in the NASA Equipment Management System (NEMS).

c) All ODIN-owned equipment shall be tagged as an ODIN asset prior to being delivered to a customer.

d) The Contractor is not required to clean Government-owned computer hard drives except if an organization opts to continue using the equipment and requests the Contractor to clean the hard drive.

e) Contractor-owned equipment shall be cleaned in accordance with their disk cleaning procedure as approved by the GSFC IT Security Manager (ITSM).

f) If a computer will not boot up and the Contractor determines that a workable solution is not available, the Contractor shall remove and destroy the hard drive prior to replacement.

g) The Contractor shall submit a Report of Survey (NASA Form 589) for any Government-owned asset that is lost while in its possession.

h) The Contractor shall work closely with the losing organization's management and property custodian in the event an ODIN-owned asset is lost. In the case of suspected theft, the Contractor shall notify GSFC Security immediately.

i) The Contractor shall provide a list of all ODIN-owned assets that were lost or stolen during the previous month. The reporting requirements are defined in DRD 3 of this Delivery Order.

j) The Contractor shall provide a list of all the ODIN-managed, Government-owned equipment that was moved by the Contractor each month. This report shall be sent to the GSFC SEMO/Code 235 on a monthly basis.

22. **Attachment D – Safety & Health Plan** is incorporated.

23. **Attachment E – Subcontracting Plan** is incorporated.

ATTACHMENT A

UNIT PRICE PER SERVICE

Attachment A
Unit Price Per Service

Seat Type	Base Price	Option Price
GP2 PC	$ 146.00	$ 147.00
GP2 Mac	$ 160.00	$ 161.00
GP3 PC	$ 179.00	$ 180.00
GP3 Mac	$ 250.00	$ 251.00
SE1 PC	$ 151.00	$ 152.00
SE1 Mac	$ 163.00	$ 164.00
SE1 Unix	$ 373.00	$ 374.00
SE2 PC	$ 168.00	$ 169.00
SE2 Mac	$ 196.00	$ 197.00
SE2 Unix	$ 386.00	$ 387.00
SE3 Unix	$ 733.00	$ 734.00
SE1 PC Laptop	$ 199.00	$ 200.00
SE1 MAC Laptop	$ 271.00	$ 271.00
Lan B	$ 173.00	$ 173.00
Lan C	$ 25.00	$ 25.00
APP1	$ 40.00	$ 40.00
COMP1	$ 92.00	$ 92.00
FILE1	$ 40.00	$ 40.00
WEB1	$ 77.00	$ 77.00
Fax 1	$ 37.00	$ 37.00
Fax 2	$ 60.00	$ 60.00
Fax 3	$ 90.00	$ 90.00
Pcell	$ 60.00	$ 60.00
PDA	$ 55.00	$ 55.00
RC1	$ 48.00	$ 48.00
NAD	$380,291.00	$385,291.00

Attachment A
Unit Price Per Service

Seat Type	Base Price	Option Price
GP2 PC	$ 146.00	$ 147.00
GP2 Mac	$ 160.00	$ 161.00
GP3 PC	$ 179.00	$ 180.00
GP3 Mac	$ 250.00	$ 251.00
SE1 PC	$ 151.00	$ 152.00
SE1 Mac	$ 163.00	$ 164.00
SE1 Unix	$ 373.00	$ 374.00
SE2 PC	$ 168.00	$ 169.00
SE2 Mac	$ 196.00	$ 197.00
SE2 Unix	$ 386.00	$ 387.00
SE3 Unix	$ 733.00	$ 734.00
SE1 PC Laptop	$ 199.00	$ 200.00
SE1 MAC Laptop	$ 271.00	$ 271.00
Lan B	$ 173.00	$ 173.00
Lan C	$ 25.00	$ 25.00
APP1	$ 40.00	$ 40.00
COMP1	$ 92.00	$ 92.00
FILE1	$ 40.00	$ 40.00
WEB1	$ 77.00	$ 77.00
Fax 1	$ 37.00	$ 37.00
Fax 2	$ 60.00	$ 60.00
Fax 3	$ 90.00	$ 90.00
Pcell	$ 60.00	$ 60.00
PDA	$ 55.00	$ 55.00
RC1	$ 48.00	$ 48.00
NAD	$380,291.00	$385,291.00

ATTACHMENT F
GODDARD SPACE FLIGHT CENTER
Requirements Document

1.0 SEAT AND SERVICE MODEL VARIATIONS

1.1 Desktop Seats

The following variations, revisions, and clarifications to the desktop service model are applicable to this delivery order. Changes to Table E.2.1.1, Desktop Seats, are shown in Appendix A.

1.1.1 Platform Performance Specifications For PC and Macs

The following table defines the minimum performance levels required. All proposed platforms must meet or exceed these performance levels. The Government will consider specific requests for waiver below the minimum performance level, but in no event shall a waiver be granted for performance reduction greater than 5%. All waiver requests shall be submitted to the Delivery Order Contracting Officer's Technical Representative (DOCOTR) for consideration.

IV&V Level	PC Desktop Scale	Mac Desk top Scale	PC Laptop Scale	PC Light-weight Laptop Scale	Mac Laptop Scale	Mac Light-weight Laptop Scale
Platforms						
PC desktops						
GP2 standard - Mid-level	80%					
SE1 optional - High-end	95%					
SE2 optional – High-level	95%					
Macintosh desktop						
GP2 standard - Mid-level		100%				
SE1 optional - High-end		100%				
SE2 optional – High-level		100%				
PC laptop						
GP3 standard - Mid-level			80%			
GP3 optional - High-level			90%			
SE1 optional – High-level			90%			
PC Lightweight laptop						
Lightweight Laptop - Mid-level				85%		
Macintosh laptop						
GP3 standard - Mid-level					85%	
GP3 optional - High-level					95%	
SE1 optional – High-level					95%	
Macintosh thin laptop						
Lightweight Laptop - High-level						100%

1.1.1.1 File Services:

The standard for file services is "None." Basic, regular and enhanced are options.

1.1.2 GP3 Seats

1.1.2.1 General Requirements

The following applies to all GP3 seats:

- Rechargeable batteries are included under all GP3 seats.
- All GP3 seats shall come with a carrying case.
- All laptops will come with a modem, and a NIC card.

1.1.2.2 PC Lightweight Laptop Seat

A PC lightweight laptop is a new service level option. The base lightweight PC laptop shall not exceed 3.5 lbs in weight (the weight does not include the floppy drive or CD-ROM Drive). Laptop computer components shall also include the following: computer components, (i.e., processor, motherboard, ram, hard-disk, screen, keyboard and mouse), integrated card bus slots, both a floppy drive and a CD-ROM Drive, system battery, and all features and functionality of the laptop platform and commercially-available lightweight/ultra portable laptops, including, at a minimum, processor, display, full function keyboard, modem, hard disk and connection for external peripherals.

1.1.2.3 The MacIntosh Thin Laptop

If available, the MacIntosh thin laptop shall not exceed 1 inch in thickness. Base laptop computer components shall include: processor, motherboard, ram, hard-disk, at least 15.2 inch wide screen display, keyboard, mouse, integrated card bus slots, floppy drive, CD-ROM Drive, 1 system battery, and connection for external peripherals.

1.1.2.4 GP3 Docking Station

The docking station shall be an option on all laptop seats. The docking station shall include a mouse, a keyboard, and monitor. All components of the docking station shall be tech refreshed with the GP3 seat (if this option is selected).

If a docking station is not commercially available a monitor, keyboard, and mouse shall be supplied by the Contractor.

1.1.3 Enhanced Seats

1.1.3.1 SE2 and GP3 Seats

SE2 Plus and GP3 enhanced catalog option—The Contractor shall offer a catalog option for SE2 and GP3 seat customers whose requirements are not met by the high end SE2 and GP3. On a quarterly basis, an architecture team within GSFC will define the requirements of the augmentation for this seat. The Contractor shall then propose a configuration that meets these requirements, and that configuration shall be supplied to those who choose this catalog option.

The Contractor shall make this option available only to those who are scheduled for tech refresh.

1.1.4 Seat Changes and Deletions

The Government will be able to change seat types and service levels, and/or delete seats at any time during the delivery order. The Contractor shall provide monthly reports to DOCOTR regarding the number of seat changes and deletions. The Contractor shall provide seat changes within 10 days and service level changes within 5 days of DOCOTR approval.

If the Government changes a seat type during the delivery order—e.g., from a GP2 to a GP3 for a person moving from a traditional desktop system to a portable system with a docking station—the monthly seat price shall change to the existing cost of the new seat type and will be effective on the 1st date of the month following delivery of the new system, but no one-time costs shall be levied. This is limited to one seat change per customer per delivery order.

1.1.5 New Seats

The Contractor shall provide new seats appropriately configured for the seat type within 10 working days of DOCOTR approval. For new desktop seats, the platform delivered shall meet or exceed the current quarter's performance profile ranking at the time the new seat request is received.

1.1.6 Temporary Seat

In accordance with Contract Section C.5.9.3, the Contractor shall provide temporary seats appropriately configured for the requested seat type and provide all the standard functionality. Pricing for a temporary seat shall be based on the monthly price of a comparably configured full seat. Any part of a month will be priced at a full month. Temporary seats shall be provided in accordance with the following unless the requestor agrees to longer response time or lesser functionality for the specific request:

- The Contractor shall provide temporary seats within 5 days of the customer's request.
- The characteristics of a temporary seat shall include connectivity and/or service to support planned meetings, conferences, authorized travel, short-term projects, etc.
- Temporary seats do not have to be IV&V approved but do have to meet minimum CIO standards. There shall be no additional service charge for providing temporary seats.

1.1.7 Personal Data Assistant (PDA's)

PDA's shall be available as a seat and shall include hardware, maintenance, installation of the operation system, synchronization to one calendaring software and communication services. Product offerings shall include support for Palm and for systems that become compatible with Meeting Maker in future releases. The PDAs shall be compatible with all desktop seats. The PDAs shall support the GSFC enterprise MeetingMaker solution standard only. Conduit software shall be supplied and supported. The Contractor reserves the right to accept or deny existing PDAs as a seat with DOCOTR concurrence.

Service Type	Service Level	Typical Service Characteristic
PDA	Mid-level Black & White PDA	Black & White PDA
Hardware Maintenance	Premium	Restore to service within 8 work hours
System Software Maintenance	Premium	Restore to service within 8 work hours
Software Tech Refresh	Regular	Refreshment within 1 year of the latest release by the software vendor
Moves, Adds, Changes	Regular	<=5 moves/adds/changes completed within 2 work days
Integrated Customer Support/Help	Enhanced	Full services 24x7 operations; Acknowledgment of request within 1 hour
Hardware Tech Refresh	Premium	Refreshed every 3 years

1.1.7.1 PDA Display

Service Levels	Typical Service Characteristic
PDA1	Black and white
PDA2	Color

1.1.7.2 HARDWARE MAINTENANCE

Service Description: Provides standard hardware maintenance services for the computer hardware system (CPU, Memory, Monitor Services include):

- System diagnostics and trouble shooting
- System and component maintenance
- Hardware configuration, tracking, and documentation.

Service Levels	Typical Service Characteristic
None:	No hardware maintenance provided
Premium:	Restore to service within 8 work hours
Enhanced:	Restore to service within 4 work hours
Critical:	Restore to service within 2 contiguous hours

1.1.7.3 SYSTEM SOFTWARE MAINTENANCE

Service Description: Provide software maintenance services for system software including the operating system, security software, and appropriate "middleware" communications software, OS services, application services, and system management services). Software patches are modifications to the software which provide security and bug fixes. Services include:

- Diagnostics and trouble shooting
- Application configuration, tracking, and documentation
- Patch acquisition, testing, verification, and installation

Service Levels	Typical Service Characteristic
None:	No system software maintenance
Premium:	Restore to service within 8 work hours
Enhanced:	Restore to service within 4 work hours
Critical:	Restore to service within 2 contiguous hours

1.1.7.4 SOFTWARE TECHNOLOGY REFRESHMENT

Service Description: Provides for periodic refreshment of system and ODIN application software (appropriate to the ODIN seat type) to more effectively and efficiently perform basic system and application objectives of the relevant ODIN seat. This service provides the seat with new versions, upgrades, modifications, and non-security and non-bug related patches associated with the system and ODIN application software. Software technology refreshment will supersede hardware technology refreshment. The Contractor shall accelerate the hardware technology refreshment for a seat when the software requires hardware upgrades to run effectively and efficiently. Refreshment of the standard application software suite must be consistent across the Agency to the extent that interoperability issues do not arise as a result of using different versions of software.

Service Levels	Typical Service Characteristic
Regular:	Refreshment within 1 year of the latest release by the software vendor
Enhanced:	Refreshment within 1 year of the latest release by the software vendor plus provides the capability to request and receive software refreshment within 1/2 year of the latest release by the software vendor, on an individual software product basis.

1.1.7.5 INTEGRATED CUSTOMER SUPPORT/HELP DESK

Service Description: Provides Help Desk contact, resolution, and tracking services for customer support for the following ODIN supported capabilities:

- ODIN Communications Systems Services
- System hardware, system software, and application software
- Supported catalog hardware and software

The service also includes the generation of trouble tickets, providing customer and service providers with system status and alerts, and submitting unresolved problems to ODIN service providers. The ODIN provided Help Desk will be responsible for routing and tracking user requests for non-ODIN services to the appropriate service provider. (See Section C.5.3, Integrated Customer Support/Help for additional requirements.)

Service Levels	Typical Service Characteristic
Enhanced	Full services 24x7 operations; Acknowledgment of request within 1 hour

1.1.7.6 HARDWARE TECHNOLOGY REFRESHMENT

Service Description: Provides for periodic refreshment of system hardware to more effectively and efficiently perform the objectives of the relevant ODIN seat type.

Service Levels	Typical Service Characteristic
Basic:	Refreshment at least every 5 years with no more than a 3 year average
Regular:	Refreshment at least every 4 years
Premium:	Refreshment at least every 3 years
Enhanced:	Refreshment at least every 1.5 years

1.2 Desktop Services

1.2.1 Maintenance—Desktop Seat

The following applies to hardware maintenance, system software maintenance, and application software maintenance for all desktop seats:

- None, Basic, and Regular are not options.
- Premium shall be the standard for all desktops except NAD where the standard is NONE.
- On any seat, the service levels for these three maintenance options shall be the same.

1.2.2 Maintenance—Peripherals

On all desktop seats, the Contractor shall provide maintenance to all existing Government-owned peripherals with a gross asset value of $750 or less per item at no additional cost to the Government. However, the Contractor, with DOCOTR concurrence, on a case-by-case basis, may refuse to provide maintenance on a peripheral. Factors to be considered include, but are not limited to, age of the peripheral; compatibility with desktop offerings; and supportability with the current ODIN standard.

None is an option.

For the NAD seat, none is the standard. Hardware peripheral maintenance is an option.

Installation of peripherals purchased from a non-ODIN source shall be at no additional cost to the Government. Peripherals purchased from a non-ODIN source may be signed up as MA seats.

1.2.3 Shared Peripheral Support with System Administration

The following services shall be provided by the Contractor as part of System Administration:

* If a user or organization has a printer that is signed up as a NAD or LAN C seat, the Contractor is required to install the necessary drivers and set up the computer(s) for all identified users for that printer. All users must be an ODIN tech refresh seat or a NAD with at least regular system administration..

* If a user is configured to print to a network printer prior to tech refresh, that configuration shall be reestablished on the new machine.

* If a user or an organization has a networked copier installed, the Contractor shall coordinate and work with the identified copier vendor to ensure the correct drivers are installed and to set up the computer(s) for all identified users of that copier where such users are an ODIN tech refresh seat or a NAD with at least regular system administration.

1.2.4 System Administration for Desktops

The desktop system administration service description for all seat types is augmented as follows:

- Provides system administration services

- Services may be basic network security compliance; basic and enhanced security management; performance monitoring and optimization; problem tracking and error detection; account management; configuration management; and user support
- Enhanced is an option for NADs
- If system administration is ordered, hardware maintenance, system software maintenance, and application software maintenance must also be ordered.

In addition, the following services are to be provided at each service level.

1.2.4.1 Basic Service Level

- Network protocol administration
- Email account management
- Access to and management of Center's domain-available peripherals and services (USENET, time, DNS, etc.)
- Basic security compliance management, including information about and access to system security patches, network services access control mechanisms with installation guidelines, and/or on-site installation assistance.
- Response within 2 working days for customer requests

1.2.4.2 Regular Service Level

- Network protocol administration
- Email account management
- Access to and management of Center's domain-available peripherals and services (USENET, time, DNS, etc.)
- Network security management
- User account management for enterprise services (such as email, UNIX, NT, and user and group entries where appropriate for seat)
- Provision of Configuration Guidelines and/or remote or on-site system software installed according to those guidelines where applicable
- Workstation host level security, including information about and access to system/application security patches, network services access control mechanisms and/or anti-virus mechanisms with installation guidelines and/or remote or on-site installation.
- Basic network security compliance
- Basic security monitoring and management
- Performance Monitoring and optimization
- Hardware procurement configuration consultation.
- Response by next working day for customer requests

1.2.4.3 Enhanced Service Level[1]

In addition, to the services included in the Regular service level, enhanced services include a pre-negotiated set of the following services, nominally provided by a dedicated systems administrator:

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1 *Minimum order period is 12months.*

2 Seat groupings may combine into multiple organizations within a building or a single organization with 35 or more full seats housed in a maximum of two buildings may choose this service level.

A minimum of 35 full seats within a building may choose dedicated support[2]. If fewer than 35 seats require this service, they will be charged at the 35 full seat minimum.

Service Requests would be placed through the IntelliCenter for tracking purposes. They will be processed by an on-site facilitator and routed directly to the technician for resolution.

The assigned technician would be responsible for daily support activities, seat configuration management and security assessments. Application/operating system updates and the implementation of security patches/fixes would be coordinated and implemented within a master schedule for the overall program at GSFC. Standard configuration of the environment would follow ODIN guidelines for network and desktop configuration. Requirements that do not interfere with the basic operability of the Seat would be supported such as:

- Desk side response within 30 minutes
- Dual boot systems will be supported
- Local, customized backup, restore, and archive service
- Site specific license management for Triage 3 applications
- Direct on-site user education and assistance
- Site-specific consistent system configurations
- Site-specific system documentation
- Desk side system administration functions to support the installation and effective execution of organizational specific applications
- Daily system monitoring
- System-level performance monitoring, tuning and optimization
- Site-specific client-server and network configuration management
- Deskside per system account management (e.g. create, lock, remove IDs)
- Site-specific peripheral management (e.g. custom partitioning disks, regular periodic defragmentation of disks, regular, periodic cleaning of tape units, etc).
- Web server and installation and administration and web-site management
- Address ongoing and emerging life cycle system administration issues for the installed computing environment
- Perform capacity planning and site architecture to optimize use of information technology resources

1.2.5 Training

None is standard.

1.2.6 Local Backup and Restore

None is the standard for GP-SE seats. BASIC is weekly incremental backup of one data directory and one e-mail directory as defined by the User.
Regular is a weekly incremental of the entire hard disk. Enhanced becomes daily incremental of the entire disk.

1.2.7 Integrated Customer Support/Help Desk

Basic and Regular are not options. For all seats Enhanced is the standard service level. A one-hour response acknowledgment time is required during normal working hours of operation. However, a one-hour response acknowledgment time is required 24 x 7 for all users who have selected critical restore to service.

1.2.8 Technology Refresh

Prior to time of tech refresh, the customer's seat configuration shall be analyzed with respect to what effects the refresh shall have on the functionality of the system. A determination shall be made as to what existing hardware peripherals and software will be incompatible with the upgrade. The contractor shall enable the customer's hardware peripherals and software to function with the refreshed system. The Contractor may request evidence that the software is licensed for any Government provided software. In the event that it is not technically possible to make the customer's hardware peripherals and software work with the new system, the Contractor shall work with the customer to determine how to best restore functionality.

As much as the operating system allows, the customer's desktop, shortcut, and toolbars should look exactly as they did before refresh.

The technician shall allow the customer to run through a test drive of the refreshed machine while the technician is present. The technician shall address refresh issues without the customer having to open a ticket

The Contractor shall provide a tech refresh plan including numbers of seats to be refreshed and suggested candidates on a quarterly basis. However, each organization has the right to revise the list of seats to be tech refreshed.

Before completing the tech refresh process, technicians shall ensure that customers understand any changes made to their desktops, are made aware of any potential impacts to the operations of their systems, and are returned to full service as quickly as possible.

1.2.9 Technology Refreshment Baseline

The Contractor is required to submit a revised technology refreshment baseline (Master Contract Attachment R) quarterly in accordance with Contract Section N.

When portable computers are refreshed they must be replaced with machines of similar functionality with current technology and units of equal to or smaller size and lighter weight.

1.2.10 Desktop Software Load (ODIN Application Software)

a) For this Delivery Order, the Government has defined a GSFC core software load and a GSFC standard software load. The core software load is required on all desktop seats. The standard software load is available upon request to all desktop seats at no additional cost. Appendix B lists the required software. All desktops shall be configured with the required GSFC core software load within the first six months of the delivery order. Any hardware refreshes necessary to meet this requirement shall be performed. Additionally, all new, replaced, or refreshed desktop seats shall contain at least the GSFC core software load as listed in Appendix B. The Contractor is responsible for acquiring and maintaining the licenses for all software provided as part of the core and standard loads.

b) The Contractor shall support all software listed in current and future versions of NASA-STD-2804, Minimum Office Automation Software Suite Interface Standards And Product Standards. Support includes, but is not limited to, installation and reinstallation, upgrades, software patches, bug fixes. Any hardware refreshes or memory upgrades necessary to meet new software requirements shall be performed. Support for shareware includes, but is

not limited to, installation and reinstallation. In those areas where the customer has purchased the shareware, support includes, but is not limited to upgrades, software patches, and bug fixes. For a shareware product, Contractor support may be limited by the amount of support provided by the vendors of the shareware.

c) In accordance with E.3.1.7 Software Technology Refreshment of the Master Contract, the Contractor shall refresh the system and ODIN application software within 1 year of the latest release by the software vendor. A user may select the "enhanced" service level. Once the Contractor has tested the new release, the Contractor shall present its software refresh plan to the CCB, after review by the DOCOTR, in sufficient enough time to ensure roll out within 1 year of release.

d) In accordance with C.5.2 End User Documentation, the Contractor shall provide unrestricted access to end user electronic documentation on ODIN services for the use of any products provided. Hardcopy documentation, including media, shall be available in the catalog.

e) The latest version of Eudora, Netscape, PC and Mac Antivirus, and Meeting Maker (Meeting Maker users are capped at 2,300 non-catalog users that are determined by the Government), as approved by the DOCOTR, shall be available on the CNE web page for download to all NADs with access to the GSFC internal website. Licenses for this software, excluding Meeting Maker, shall be included with the NAD seat. All anti-virus updates shall be made available for download immediately upon release from the software vendor.

f) Security patches on all servers, except File1, App1 and Comp1 shall be completed within the following time frame: 24 hours for those rated High Priority by NASIRC and 48 hours for Medium Priority. Security patches for all workstations within the GSFC domain shall be completed within 20 business days (provided sufficient bandwidth and an SMS implementation is complete) from the time that the Government approves the Contractor's test results. Customers who do not log into the GSFC domain will be deployed within a concurrent 40 business day period.
Note: Currently, approximately 49% of full ODIN seats have GSFC NT domain accounts.

1.2.11 Moves, Adds, and Changes

In addition to the requirements in Contract Section E.3.1.8, Moves, Adds, Changes (MAC), the following definitions apply: (a) A move is defined as de-installation, move and re-installation of system hardware. (b) Virtual moves do not count in computing the total number of moves included in the service levels. A virtual move is one that does NOT require a physical dispatch of a technician or analyst. (c) Moves are aggregated by service, for example, average of one move per year for each "seat" type in each of these categories: desktop, server, and communications services. (d) Wiring needed to provide connectivity to a seat is included in the seat price provided the basic infrastructure is in place to support it.

In addition, the Contractor shall provide resources or analysis to aid the customer in determining which hardware and software purchased from another source, other than ODIN is compatible with the existing system. The Contractor shall install the item only if the installation does not make the machine unstable or destroy existing functionality. The desk side visit will count as a move, add or change.

1.2.12 NADS

The standard return to service time for a NAD shall be 8 business hours unless otherwise noted.

1.3 Server Seats

1.3.1 Web Server and File Server Seat

1.3.1.1 WEB1 Seat Description—Web Server Services

Functionality: Provides space on ODIN WWW infrastructure to communicate information within the scope of the ODIN communications system. This includes the hardware, network connection, system software and support, web server software and support, and back-end database connectivity and necessary infrastructure to support web application development by NASA. Web services shall be subject to the same availability and security requirements as the ODIN communications system.

1.3.1.2 Standard Services

Service Type	Service Level	Typical Service Characteristics
System Administration	Enhanced	ODIN controlled
Maintenance	Enhanced	Restore to service within 4 work hours
Storage Volume	Basic	50MB of server space
Data Backup and Restoration	Regular	Requires backups of seat data to be performed daily
Performance Delivery	Premium	Center-wide

1.3.1.3 Performance Delivery

Service Description: Provide the following performance delivery on ODIN provided servers. The Government reserves the right to verify SOW performance requirements. The Contractor shall provide the LAN services required to meet the performance delivery requirements.

Service Levels	Typical Performance Characteristic
Basic	
WEB1	Workgroup Web: Typically accessed by workgroup/projects through intra-Center network (Intranet)
APP1	Workgroup App: Application/database typically utilized by workgroup/project
COMP1	Workgroup Computational Server: Provides equivalent processing power of a 200 CFPRate SPECMark computational server
FILE1	Workgroup File Space: Typically accessed intermittently by a small workgroup. ODIN provided storage volume shall support transfer rates consistent with selected LAN service level for 1 concurrent user access in a production environment.
Regular	
WEB1	Organizational Web: Typically accessed by a Government organization such as a directorate/division through intra-Center network (Intranet).
APP1	Organizational App: Application/database typically utilized by a Government organization such as a directorate/division.
COMP1	Organizational Computational Server: Provides equivalent processing power of a 400 CFPRate SPECMark computational server.
FILE1	Organizational File Space: Typically accessed intermittently by a Government organization such as a directorate/division. ODIN provided storage volume shall support transfer rates consistent with selected LAN service level for 5 concurrent user accesses in a production environment.

Premium	
WEB1	Agency Web: Typically accessed by Center.
APP1	Institutional App: Application/database typically utilized by entire institution on an intermittent basis.
COMP1	Institutional Computational Server: Provides equivalent processing power of a 800 CFPRate SPECMark computational server.
FILE1	Institutional File Space: Typically accessed intermittently on a center wide basis. ODIN provided storage volume shall support transfer rates consistent with selected LAN service level for 50 concurrent user accesses in a production environment.
Enhanced	
WEB1	Public Web: Typically accessed by the agency over Internet connection.
APP1	Agency App: Application/database typically utilized by entire Agency as part of the Agency's mission on a daily or weekly basis.
COMP1	Mission Computational Server: Provides equivalent processing power of a 1200 CFPRate SPECMark computational server.
FILE1	Agency File Space: Typically accessed intermittently by the agency user community. ODIN provided storage volume shall support transfer rates consistent intra-center connectivity for 500 concurrent user accesses in a production environment.
Critical	
WEB1	Public Web: Typically accessed by the public over Internet connection.
APP1	Public App: Application/database typically utilized by the public
Comp1	None
FILE1	Public File Space: Typically accessed by the public. ODIN provided storage volume shall support transfer rates consistent with intracenter connectivity for 500 concurrent user accesses in a production environment.

1.3.1.4 Performance Delivery for WEB1

- Regular (directorate wide) becomes an option
- Premium is the standard, and is defined to be Institutional Web, typically accessed by the institution (Center)
- Enhanced is defined to be Agency Web, typically accessed by the Agency
- Critical (new service level) is defined to be Public Web, typically accessed by the public over Internet connection

Web 1 seats are defined by administrative unit, where an administrative unit is a virtual web server with its own IP address and its own URL. Each virtual web server seat comes with System Administration, Maintenance, Storage Volume, Data Backup and Restoration, and Performance Delivery.

1.3.1.5 Performance Delivery for APP1 Seats

- Enhanced is defined to be Agency application/database server, typically utilized by the Agency
- Critical (new service level) is defined to be public application/database server, typically utilized by the public

1.3.1.6 Performance Delivery for COMP1 Seats

Enhanced is defined to be Agency Computational Server, providing equivalent processing power of a 1200 CFPRate SPECMark computational server to the Agency.

1.3.1.7 Performance Delivery for FILE1 Seats

- Basic is defined to be workgroup file space, typically accessed by a small workgroup, at transfer rates consistent with the users' LAN service levels
- Premium is defined to be institutional file space, typically accessed on a Center-wide basis, at transfer rates consistent with the users' LAN service levels
- Enhanced is defined to be Agency file space, typically accessed by users throughout the Agency, at transfer rates consistent with intra-center connectivity
- Critical (new service level) is defined to be public file space, accessible to the public at transfer rates consistent with intra-center connectivity

The FILE seat is defined by amount of disk space, and common service levels of the other services within the seat, as above. So, if Pickard orders a file seat with Premium maintenance, 500MB of space, daily backup, center wide use, and regular system administration, but he is only using 100MB, and Riker needs 100MB of space, with the same requirements of service, Riker does not need to order another seat, he can use space on Pickard's seat.

A customer does not need to order file services on his desktop seat to access space on a FILE1 seat.

1.3.2 Maintenance for Server Seats

Basic is not an option.

1.3.3 Storage Volume for Server Seats

Service Description: Provide server storage space on ODIN provided server.

Service Levels	Typical Service Characteristics
None	No Server Space
Basic	1 GB of server space
Regular	5 GB of server space
Premium	25 GB of server space
Enhanced	50 GB of server space

1.3.4 Service Levels for Server Seats

Server Service Type	WEB1	APP1	COMP1	FILE1
System Administration				
Regular	O	O	O	O
Enhanced	S	S	S	S
Maintenance				
Regular	O	O	O	O
Premium	O	O	O	O
Enhanced	S	S	S	S

Critical	O	O	O	O
Storage Volume				
None			O	
Basic	S	O	S	O
Regular	O	S	O	S
Premium	O	O	O	O
Enhanced	O	O	O	O
Enhanced Plus	O	O	O	O
Data Backup and Restoration				
None	O	O	O	O
Basic	O	O	O	O
Regular	S	S	S	S
Enhanced	O	O	O	O
Performance Delivery				
Basic	O	O	O	O
Regular	O	S	S	S
Premium	S	O	O	O
Enhanced	O	O	O	O
Critical	O	O		O

1.4 Communications Seats

The following variations, revisions, and clarifications to the communications service model are applicable to this delivery order.

1.4.1 ADDITIONAL SERVICES FOR LAN SERVICES – Basic LAN and Remote-S & Basic LAN service levels are added as service levels for LAN Services. These service levels are defined as follows:

BASIC SERVICE LEVEL ADDED AS SERVICE LEVEL DEFINITION – Basic LAN is added as a new LAN services service level under this delivery order. The Basic LAN service level provides operation and maintenance of the existing infrastructure. Regular, Fast, and Huge options are not available under this delivery order.

Service Levels	Typical Service Characteristics
Basic LAN	Access to existing network infrastructure
Remote-S &Basic LAN	Remote LAN access using a standard modem and provides access to existing network infrastructure

1.4.2 LANA SEAT

LANA SEAT DESCRIPTION

Functionality: Provides an single standard network connection using the existing network infrastructure capability in the facility.

Standard Services for LANA:

SERVICE TYPE	SERVICE LEVEL	TYPICAL SERVICE CHARACTERISTIC
Unit	Single	Supports a single user connection
LAN service	BASIC LAN	Provides operation and maintenance of the existing infrastructure capability
Moves/Adds/Changes	Regular	<=5 moves/adds/changes completed within 2 work days
Restore to Service	Premium	Restore to service within 8 work hours

1.4.3 LANB SEAT –If the network infrastructure requires an upgrade to meet the user requirements, then the Contractor shall submit an infrastructure upgrade proposal. All LANB seats must have concurrence by the DOCOTR.

LANB SEAT DESCRIPTION

Functionality: Provides a LAN-to-LAN connection to the existing network infrastructure capability.

Standard Services for LANB:

SERVICE TYPE	SERVICE LEVEL	TYPICAL SERVICE CHARACTERISTIC
Unit	Network	Supports a network to network connection
LAN Service	BASIC LAN	Provides operation and maintenance of the existing infrastructure capability
Moves/Adds/Changes	Regular	<=5 moves/adds/changes completed within 2 work days
Restore to Service	Premium	Restore to service within 8 work hours

1.4.4 LANC SEAT

LANC SEAT DESCRIPTION

Functionality: Provides an network connection to the existing network infrastructure and queue maintenance for items such as printers, plotters, scanners and multifunction devices. System Administration shall also include such duties as configuring IP, host and U number maintenance.

Standard Services for LANC:

SERVICE TYPE	SERVICE LEVEL	TYPICAL SERVICE CHARACTERISTIC
System Administration	Basic	Protocol administration and security
Unit	Network	Supports a network to network connection
LAN Service	BASIC LAN	Provides operation and maintenance of the existing infrastructure capability
Moves/Adds/Changes	Regular	<=5 moves/adds/changes completed within 2 work days
Restore to Service	Premium	Restore to service within 8 work hours
Hardware Maintenance	None	No hardware maintenance provided

1.4.5 CLARIFICATION: NAD VERSUS LAN – For these delivery orders, the differences between the NAD seat and the LAN seat are clarified as follows:

a. NAD Seat
   (1) A NAD seat is ordered when an end user requires network connectivity and selected ODIN services, normally provided to ODIN seats, for a non-ODIN provided computer.
   (2) Typical examples include computers that require connection to ODIN service servers (e.g., email, application, etc.) or ODIN server services (e.g., FILE1, APP1, etc.), non-ODIN computers that require system administration, and non-ODIN computers that require backup/restore services.

b. LAN Seat
   (1) The LAN Seat is ordered when an end user, or group of end users, require connectivity to the ODIN network.
   (2) LAN seats provide an IP address, or group of addresses, and domain name server support for those addresses.
   (3) LAN seats can provide a secondary connection to the network for a dual-homed computer.
   (4) LAN seats require no other ODIN services.

Typical examples: Conference rooms, multi-NIC computers, non-ODIN desktops or non-ODIN servers that do not require any ODIN services other than those listed above. The services provided by or function of the device is irrelevant.

1.5 TROUBLE TICKET RESOLUTION

The Contractor is required to ensure that all calls to the help desk are logged and followed through to resolution. If a call to the help desk cannot be resolved within the contractually obligated return to service time period, a call must be made daily to the customer to ensure that a problem resolution status is communicated until the problem is resolved. If the customer is not available at the time of the call a voicemail message must be left at that time informing the user of the status. No ticket shall be closed without documentation as outlined in this section. All calls shall be logged by the Contractor and reported to the Government on a monthly basis to ensure compliance.

2.0 METRICS

2.1 Performance Retainage Pool (PRP)

For this delivery order, the Performance Retainage Pool (PRP) referenced in Master Contract Section A.1.8 (a) is 3%. The PRP decision shall be made on a discretionary (i.e. all or none) basis.

2.2 Metric Performance Retainage Pool (MPRP)

The Metric Performance Retainage Pool (MPRP) is 1%. The MPRP will be paid on an all-or-nothing basis. The Customer satisfaction baseline metric for this delivery order is 90%. The following paragraphs are used to augment section F.1.1.3 of the Master Contract.

The Contractor shall collect, score and report customer satisfaction survey results to the Government. The Contractor shall measure customer satisfaction across five categories: help desk, desktop support, technology refresh, Infrastructure/back office support (web, USENET, email, network) and catalog. In each category, customers shall be asked to rate the Contractor's performance as "1=poor", "2=fair", "3=good", "4=very good" "5=excellent" or "N/A=not applicable". Customers shall be able to respond to customer satisfaction surveys either through a web interface or hard copy. The Contractor shall take steps to ensure that customers have guidelines on how to score the surveys to eliminate any bias in scoring. There shall be a provision on the customer satisfaction form to indicate the severity of a problem and whether or not this call concerns a recurring problem.

The Contractor shall submit a monthly customer satisfaction report that lists all customer organizations served by ODIN and all customers within those organizations requesting ODIN service each month. This report shall be provided in an electronic format mutually agreed to by the Government and the Contractor.

In this report, included with the Equipment Control Number (ECN) shall be:

- other trouble ticket(s) associated with that equipment for that month (including the trouble ticket number and a short description of the problem reported)
- raw customer satisfaction scores (if they were provided) across all categories—help desk, desktop support, technology refresh, infrastructure performance and catalog
- monthly roll-up report where the primary measure is the percent of respondents who choose a score of "very good" or "excellent". This report shall also include the total number of trouble tickets worked during the same period. This report is for comparison purposes only.

3.0 DELIVERY ORDER TRACKING AND CATALOG SERVICES

3.1 On-Line Delivery Order (ODO) Tracking

The Contractor shall provide and maintain an electronic database containing all elements of the GSFC delivery order. This database shall include all services including seat type, quantities and price. Customer organizational code, name, phone number and IP address shall also be included. Equipment ECN number, building and room number where item is located, and item order and installation/delivery date shall also be included. The ODO shall also include all deleted seat information including date of deletion. The information within the database shall be maintained for the length of the delivery order. The Contractor shall update the database whenever a DOCO-issued change is made to the delivery order. The Government/Contractor may use this database as a resource to generate the reports for delivery order status, DRD's, and an invoice verification tool.

In addition to the identified requirements, the following capabilities are required:

- Each seat record in the database shall list all services purchased from ODIN (including catalog items).
- Shall have the capability to allow global seat or service level changes (by organization or center).
- The DOCOTR shall identify individuals who can make changes within the approval cycle.

- The database shall have an option to select a number of records per page to be viewable by the user.
- The database shall include an interactive tool that links to the basic seat definition.
- The database shall have a link to the catalog allowing the user to place orders as required.
- The database shall have query and reporting capabilities by names, seat type, codes, organizations, IP address, Installation/Delivery Date, deleted seat data, ECN, building, service levels, prices, and dates.
- The database shall have a help function to give general instruction.

3.2 Catalog Services

3.2.1 Catalog of Services and Commercial Components (CSCC)

In accordance with Master Contract Section C.5.7, the full CSCC shall be available for ordering on the first day of the delivery order. Services purchased from the catalog shall be effective for 36 months from the date of initial service delivery, unless 36 months is not applicable/appropriate to the purchased service and other terms are specifically stated in the catalog. The catalog shall clearly define, in precise and understandable terms, what coverage, support, etc., is included in catalog prices.

3.2.2 Catalog Maintenance

In addition to the requirements defined in the Master Contract, Attachment G, the Contractor shall provide the following maintenance for catalog services during the delivery order period of performance:

a. Category 1 Hardware and Software Products and Services, the user shall receive the same level of return to service as ordered for the seat/services.

b. Category 2 Software Products and Services, if the Contractor can resolve the ticket without interfacing with other service providers, it shall receive the same level of return to service as ordered for the seat. If the problem requires interfacing with other non-ODIN service providers it shall be handed off within 30 minutes of the tickets being opened.

c. Category 3 Software Products and Services, the Contractor shall provide the OEM's standard maintenance (such as bug fixes, patches, etc.). as defined in the Master Contract G.1 Catalog of Services and Commercial Services.

d. Categories 1 and 3 Software, maintenance shall include point releases, but not new versions unless it is the Software publishers commercial practice as defined in the Master Contract G.1 Catalog of Services and Commercial Services.

4.10 Installations

4.10.1 General

The Contractor shall perform all network equipment installations and maintenance in a neat and workmanlike manner. Specifically:

- The Contractor shall leave all telephone and LAN closets, network interface rooms and storage areas free of trash and debris that it generates.
- Network devices and cabling shall be installed in such a way that they do not interfere with the servicing or removal of other components; in particular, cables from one piece of equipment should not be installed so that they must be disconnected before another piece of equipment can be removed for service or replacement
- If sufficient space exists, network devices and cabling shall be installed in such a way that additional equipment can be added without moving existing equipment
- All cabling and equipment (new or existing) shall be clearly and unambiguously labeled. Labels shall be visible without having to move equipment and shall conform to the device or cabling identification scheme used in the network topology diagrams
- The Contractor shall report any unsafe or unclean conditions found (for personnel or equipment) to the DOCOTR. This includes, but is not limited to, water leaks, excessively hot closets, failed air conditioning, poor power conditioning, poor lighting, etc.

4.10.2 Contractor Responsibilities

The Contractor shall be responsible for physically transporting new and replacement network equipment from storage to the job site and for installing the equipment in accordance with the requirements above.

The Contractor shall provide all necessary incidental installation supplies including, but not limited to tie-wraps, labels and removable media necessary for equipment installation.

The Contractor shall provide maintenance support, including preventive maintenance and trouble-shooting, for the rack mounted Uninterruptible Power Supplies (UPS) installed in the telephone closets that support the network infrastructure. The Contractor is not responsible for the maintenance support of the high volts/amp facility sized power conditioning units/UPS, such as the one provided by the Government in Building 1/Rm 45/49.

4.11 Center Cable Plant

The Center Cable Plant includes all of the intra and inter-building fiber optic cable, and the copper based unshielded twisted pairs wiring, and all ancillary support, organization, and protection hardware. This does not include the wiring currently required to support the telephone system, the radio frequency (RF) video distribution system, or other systems as designated by the DOCOTR.

The Government shall retain ownership of all Center Cable Plant infrastructure, including, but not limited to wiring, both copper and fiber, wiring support hardware, equipment racks, relay racks, wall mounted cabinets, patch panels, cross-connect blocks, wiring organization panels and brackets, power supplies, power panels and all network electronics.

4.11.1 Cabling

The Contractor shall be responsible for providing operations and maintenance of the administrative networks Center Cable Plant wiring infrastructure. Cabling shall be maintained such that it remains compliant with the manufacturers' published specifications and the post installation documented certification testing. When connectivity problems are isolated to the Center Cable Plant cabling the Contractor shall use industry standard testing equipment, tools, and procedures to identify the problem. Where cabling is damaged to the extent that it is necessary to have the cabling repaired or replaced by the Government furnished service provider, it shall be the Contractor's responsibility to verify that the wiring Contractor certifies the new cabling, and report any discrepancies to the DOCOTR.

4.11.2 Ancillary Hardware

Ancillary hardware has been employed in most areas of the Center Cable Plant to provide a well protected and organized structured physical plant infrastructure, which includes ceiling mounted "J" hooks, conduit, interduct, latching duct, rack mounted cable organizers, etc. Where this hardware exists, it shall be the responsibility of the Contractor to maintain and use the material to the greatest extent possible to ensure a well-protected organized physical plant in compliance with industry standard recommendations. Where this hardware is not available and potential problems and damage may occur it shall be the Contractor's responsibility to bring the situation to the attention of the DOCOTR.

4.11.3 Facility Spaces

When the Contractor works in these spaces he shall remove any wiring or installation debris, personal trash, construction dust, tie wrap scraps, shipping cartons, packing material, spare equipment, patch cables, and any other debris not necessary to the function of the spaces generated by the Contractor. When the Contractor enters these spaces for any reason, any debris left by another Contractor should, at a minimum, be reported to the DOCOTR. Where it is not a labor-intensive effort the Contractor is required to remove that debris.

4.11.4 Wiring Changes

The Contractor shall comply with all requirements of the *Guidelines for Horizontal Cabling System Installation*, EIA 568A, *Commercial Building Telecommunications Wiring Standards* and all manufacturers' recommended practices and procedures while making changes to, or installing new horizontal inter building cabling unshielded twisted pair wiring. The Contractor shall utilize only the Government furnished service provider for making changes or additions to either inter or intra-building wiring of the Center Cable Plant that are beyond the Contractor's capabilities.

4.11.5 Documentation

The Contractor shall keep up-to-date Building Network Cable Plant documentation under the CAT-5 Initiative or other Government-led cabling activities. This includes maintaining the existing documentation of building cabling, user interface jack locations, rack elevations, and network schematic diagrams utilizing COTS software. The Contractor shall add all changes and additions to this documentation. All Center Cable Plant documentation shall reference physical plant labeling in such a way that a technician unfamiliar with the Center Cable Plant can find and identify all physical plant elements using only the documentation. If the Government

desires the Contractor to update and maintain the documentation of other non-CAT-5 Initiative buildings, an IUP will be generated to initiate such an action.

4.12 Remote Access

The Contractor shall provide remote dial-up access to the GNE for GSFC users in the local and remote calling areas.

4.12.1 Service Levels

Remote dial-up access to the GNE shall:

- Support speeds up to 56 Kbps modem/analog or 56/64 Kbps ISDN on a single channel
- Support, as a minimum, commonly used international modem modulation standards, Point-to-Point Protocol (PPP), Serial Link Internet Protocol (SLIP), Appletalk Remote Protocol (ARAP V2) and serial terminal connections
- Support, as a minimum, Internet Protocol (IP), Netware Protocol Stack (IPX) and Appletalk protocols
- Support multilink bonding for two channels on non-toll connections when system loading less than 50%
- New accounts shall be established within 2 business days of the request

4.12.2 User Accounts

The remote access service shall support, at a minimum, three levels of user accounts.

- Standard use account allows only local dial-in access
- Enhanced user account allows both local and toll-free dial-in access
- Travel account allows access by multiple simultaneous users for support of an organization pool of laptops with a NPG 2810 waiver.

The following policies, as a minimum, shall apply to user accounts:

- Local access limited to 4 hours per day and toll-free access limited to 2 hours per day
- Delete accounts that have been inactive for 120 days
- Accounts to be deleted within one month of separation. After notification of the departure by an approved Government representative or appropriate Government system (e.g. LISTS) which may require analysis of provided reports.
- Verify account status at least 30 days prior to account deletion
- Verify individuals utilizing a Travel account every 6 months

4.12.3 Logs and Statistics

The Contractor shall maintain, as a minimum, the following logs and statistics:

- Daily usage and peak system loading
- Toll free usage by user account
- Security monitoring, including unsuccessful login attempts and unapproved multiple simultaneous users
- Log individual sessions including username, timestamps, Caller ID/Automatic Number Identification (ANI) and session status.

All security logs and statistics will be maintained for a minimum period of one year.

4.12.4 Reports

The Contractor shall provide, as a minimum, the following reports:

- Unsuccessful logging attempts and account misuse shall be reported to, DOCOTR and appropriate GSFC Security organizations
- Toll free account usage, broken down by Division and sent to Divisions for verification (monthly)
- Usage average and peak system loading on a daily basis to the DOCOTR differentiated between local and toll-free access (monthly)

Reports shall be provided either electronically or hard copy at the discretion of the Government.

4.13 IP Address Management

The Contractor shall provide for the allocation, tracking and management of the Internet Protocol (IP) addresses of the GNE. The system currently utilized for providing this service is known as IP-Reg (Registration).

4.13.1 Service Levels

IP Address Management shall meet, at a minimum, the following service levels:

- Allocation of valid IP addresses to all members of the GNE community, via a web-based interface
- Interface with the Center Domain Name System (DNS) to associate IP address with unique DNS name, both forward and reverse mappings
- Establish new IP addresses and DNS Names within one business day of the request
- Support, via a web-based interface, requests to establish a new IP address/DNS name/CNAME (Canonical Name-alias) or MX (Mail Exchange) record, move the DNS Name to a new IP address, change the DNS name/CNAME/MX, delete the IP address/DNS name/CNAME/MX and support updates to contact information.
- The user web interface shall maintain a response time of less than 5 seconds and the web page interface to the IP address database will maintain a response of less than 30 seconds.

4.13.2 User Classes

The IP address management service shall support, as a minimum, the following user classes:

- Users shall be allowed to establish, update or delete only records directly allocated to them.
- Rib Managers shall be allowed to establish, update, delete or reserve records in assigned IP address block, sub-net or network.

All users requesting IP addresses must provide, as a minimum, contact name, system location, phone number and MAC address of system

4.13.3 Policies

The following policies, as a minimum, shall apply to the IP address management service:

- The contact information provided by the user shall be verified via a user lookup in the X.500 directory system, as a minimum.
- The data regarding IP address and DNS name change shall be verified for accuracy within two business days of any change request.
- The identity of Rib Managers and their address responsibility shall be validated on a quarterly basis.
- Contents of the entire IP address contact database shall be validated against the X.500 directory system every six months, discrepancies resolved and any irresolvable discrepancies reported to the DOCOTR.
- All GNE addresses shall remain under the control of the Government, which is solely responsible for approval of Rib Manager assignments and IP address block allocations
- The DOCOTR shall approve any special requests.

4.13.4 Logs and Statistics

The Contractor shall maintain, as a minimum, the following logs and statistics:

- Allocated IP addresses broken down by block, building, project or rib manager
- Unallocated IP addresses broken down by block, building, project or rib manager
- Security monitoring, including unsuccessful IP address requests or attempts to modify IP addresses
- Log individual sessions including originating IP address, timestamps and requested actions

All security logs and statistics shall be maintained for a minimum period of one year.

4.13.5 Reports

The Contractor shall provide, as a minimum, the following reports:

- Unauthorized attempts to modify the IP address entries shall be reported to the DOCOTR and appropriate GSFC Security organizations.
- Listing of all Rib Managers and their IP address responsibility to the DOCOTR (quarterly)
- Complete listing of IP address blocks – their current status, numbers used and assignment to the (monthly) appropriate security organization

Reports shall be provided either electronically or hard copy at the discretion of the Government.

4.14 Enterprise/Back-Office Services

The Contractor shall operate and maintain all Enterprise and Back-Office services defined in this document. The Contractor shall provide any sustaining engineering activities as necessary to ensure the proper functionality of the services and their compliance with Agency and Center standards and policies. Especially noteworthy are NPG 2807, NPG 2808, NPG 2815 and NPG2810, although this list is not all inclusive.

The Government deems naming and addressing services to be absolutely essential to the proper functionality of the network (X.500, DNS, etc). Nothing in the network works without those capabilities.

3.2.3 Re-Utilization of Catalog Product or Unique Services

If a seat with any catalog-purchased item(s) is deleted or cancelled, then the catalog service associated with that seat shall remain available for use by the Government for the remainder of the service period associated with the initial purchase of the catalog item. The service may be directly transferred to another seat or held in account by the Contractor until transferred to a new or existing seat, as directed by the DOCO/DOCOTR. A single re-utilization as described here will incur one Move/Add/Change (MAC) for the total transfer.

3.2.4 Catalog Ordering

The time from receipt of customer order to delivery and installation shall not exceed 10 business days. The Contractor shall inform the user of the expected date. If the expected delivery date does not meet the contractually required 10 business days, the user can accept the revised date, order an alternate item, or cancel the order without penalty. The Contractor shall update their catalog no less than once every quarter. The Contractor cannot delete any category of items (printers, scanners, PDA's, etc.) from the catalog without DOCOTR concurrence.

3.2.5 User Assistance for Catalog Services

The Contractor shall identify all necessary software and hardware components required to make the ordered catalog products/services functional. This includes, but is not limited to, all cables, cards, software and add-ons.

3.2.6 Renewal of Catalog Services

Customers may renew existing catalog services at the conclusion of the initial 36-month service period or any renewal period. The Contractor shall offer multiple renewal periods in increments of 12, 18, 24 and 36 months. This renewal shall be purchased off the catalog and shall not include the product acquisition price or any installation costs.

4.0 INFRASTRUCTURE AND BACK-OFFICE SERVICES (To be unbundled from LAN, NAD and Tech Refresh Seats and priced as a lump sum firm fixed price per month under "SuperNAD (SNAD).")

4.1 Infrastructure and Back-Office Services Management Responsibilities

This section defines the elements making up the network infrastructure and back-office services, the appropriate work areas and the responsibilities of the Government and Contractor within those work areas.

4.1.2 Infrastructure and Back-Office Services Functional Elements

The following definitions comprising the functional elements of the Center's Network Infrastructure and back-office services are used in the following sections:

Network Engineering:

- GNE Network Backbone – The network backbone consisting of the Communication Switch Routers (CSRs), the Project FDDI Ring and the physical fiber connections between them and the Building Switches and/or Routers.
- GNE WAN/MAN Architecture – The external interfaces of the institutional network, consisting of the WAN Routers, the WAN FDDI ISOLAN, the WAN Ethernet ISOLAN, the MAN Routers, and the physical connections between them and the Center's external network provider (NISN), as well as the connections between the WAN/MAN architecture and non-ODIN managed networks. The MAN connection also includes the SMDS, FNS and Frame Relay services provided to local off-base customers. This does not include the network communication hardware at the remote MAN sites.
- GNE Building Network – The building network infrastructure, consisting of the Building Switch and/or Router, Floor Switches/Hubs and the physical connectivity linking them to individual users and the GNE Backbone.
- Dial-up Services – The infrastructure providing remote dial-in network capability, for both analog modem and ISDN users, to the GNE Network consisting of the Goddard Connect dial-up server, management stations, and the physical connectivity between this equipment and the external ISDN Primary Rate Interfaces (PRIs) and the Center-operated ISDN Switch.
- Domain Name Service (DNS)/IP Management – The infrastructure providing IP address/name resolution, consisting of a primary and backup Name Servers, and the engineering required for the effective management and engineering of the Center's IP address space.
- Enterprise Services – The infrastructure providing the Center with electronic mail, list and directory services, including, as a minimum, the Center POP server, the X.500 Directory Server, Email Reflector System (ERS), the Majordomo List Service and the network connectivity interfacing them to the GNE.
- Network Performance – The equipment and software required to adequately track and assess the performance of the network, including both long and short-term trend analyses.

Security

- Security – The equipment, policy and procedures required to adequately protect the GNE, it services and users.

Facilities

- Facilities – The GNE facilities consist of those areas where GNE equipment and services are located and currently include Building 1 Room 45/49, Building Main Interface Rooms, and Floor Telecommunications Closets. Maintaining facility spaces is performed in a team effort; therefore, the Contractor is responsible for notifying the Government of adverse environmental conditions, broken access control devices, and debris not caused by the Contractor. The Contractor is responsible for ensuring access controls are used when leaving the facility space and debris resulting from the work of the Contractor is removed.

4.1.3 Work Areas

The following work areas are defined to help clarify the responsibilities of the Government and Contractors in the management of the infrastructure and back-office services:

- Operations & Maintenance – The day-to-day operations, maintenance and sustaining engineering required to provide network connectivity and network services.

- Tactical Engineering – The requirements analysis, engineering and implementation of new requirements - user, organization or policy generated.
- Strategic Engineering – The analysis, planning, design and engineering supporting the long-range development of the network and network services.
- Policy – The analysis, establishment and enforcement of guidelines for the use of the network infrastructure and back-office services and network services.
- Processes – The analysis and establishment of the appropriate procedures for the effective use and management of the network resources.

4.1.4 Infrastructure and Back-Office Services Responsibilities

This table summarizes the roles and responsibilities of the Contractor. The Contractor shall, according to the definitions provided in this document, perform the roles and responsibilities in each of the technical areas specified

	Operations & Maintenance	Tactical Engineering	Strategic Engineering	Policy	Processes
Network Engineering & Services	Lead	Lead	Partner/Teamed	Recommend Implement	Recommend Implement
Security	Escalation Implement	Lead	Partner/Teamed	Recommend Implement	Recommend Implement
Facilities	Escalation	Recommend	Partner/Teamed	Recommend Implement	Recommend Implement

The roles and responsibilities are defined as follows:

- Lead – Responsible for setting direction and performance of work in that particular functional area
- Escalation – Responsible for Government notification of any security violations or facilities issues.
- Partner/Teamed – Responsible for participating in a Government-led team in the design, development and implementation for that particular functional area. The Government maintains responsibility for strategic direction of the Center in the indicated functional area.
- Recommend – Responsible for providing ideas and suggestions for policies and processes for that particular functional area
- Implement – Responsible for installing and activating approved equipment, services, policies and processes for that particular functional area

4.1.5 Engineering and Infrastructure Upgrade Proposals (IUP)

The following sections will detail and differentiate those infrastructure services that are considered part of the SuperNAD cost, additional engineering effort are included under an IUP.

SuperNAD Cost:

The following Infrastructure support items are considered efforts and activities that are, as a minimum, included in the SuperNAD cost.

1) Operations & Maintenance
   a) Responsible for leaf (end-user) switch and backbone equipment

2) Moves/Adds/Changes
   a) Move of connection
   b) Installation (hardware, software, system)
   c) Definition Criteria – The Contractor must 'touch the machine'
3) Internet Services (Maintenance & Operations, keep upgrade/up-to-date/capacity)
   a) Electronic Mail Account (POP support/service)
   b) Domain Name Service (DNS)
   c) X.500 Directory/Email Reflector System (ERS)
   d) Usenet News
4) Property Management (report to Government identified representative)
5) Informal Engineering Collaboration
   a) Work with Code 290, Customer
   b) Provide non-binding ROM costs
6) New Installation of Government provided equipment
   a) Minimal labor, such as a single workgroup switch (<= 4 hours of engineering effort)
   b) Installation of upgrade in existing equipment (memory, card, firmware, software)
7) New Jack Activation = New Seat (LAN, NAD, Tech Refresh)
8) The return to service is 8 hours.

Engineering Effort

The following items are considered additional effort, not worthy of an IUP, but require additional engineering effort, worthy of recompense, as defined below.

1) New installation of Government provided equipment into the infrastructure
   a) For items requiring more than a minimal amount of labor
      i) To be charged via catalog in blocks of engineering effort (>= 4 hours of engineering effort)
2) Installation of Wireless Networking Hub (will be added as a catalog item)
   a) Includes installation and O&M

Infrastructure Upgrade Proposal (IUP)
An IUP is appropriate in the following situations:

1) Government Request
2) Contractor develops design and purchases equipment
3) New service not currently in Delivery Order
   a) Example: Web Email Access Server/Service

4.2 Return To Service Levels

This delivery order separates seat service levels from infrastructure and back-office services service levels. The infrastructure and back-office services shall have their own set of service levels and return-to-service (RTS) metrics as described below.

Core hours for network return-to-service are 6:00am to 6:00pm Monday through Friday eastern time. Any outages that cross core to non-core hours shall be held to the lowest RTS total. For example, a Level 1 outage that begins at 5 AM will carry a RTS time of 7 AM, due to the crossover into core hours; a Level 1outage that begins at 1 AM will also carry a RTS time of 7 AM, due to the lesser time remaining in core time. All other times including federal holidays are considered non-core hours. All RTS times are to be considered contiguous hours.

Impact	Scope of Service	Core RTS	Non-Core RTS

Level			
Level 1	GNE Network Backbone (2 or more buildings), GNE WAN/MAN Architecture, DNS, POP Server, X.500, ERS	2 hours	6 hours
Level 2	GNE Network Backbone (1 Building) GNE Building Backbone, Calendar, Timeservice, IP Reg List Service, Dial-up Services	4 hours	4 core hours
Level 3	1 floor, Workgroup (more than 10 users impacted by a single problem), Usenet, Network Video Services, any service not explicitly designated at another level	8 hours	8 core hours
Level 4	Single user	Desktop RTS	Desktop RTS

For all items considered infrastructure and back-office services, the following guidelines shall apply to the definition of outage time, unless specified otherwise in the specific section. Outage time shall begin at the time of the first notification of any problem, which at some subsequent time, is determined to be an infrastructure or back-office services problem. The outage time is independent of the verification time. Problem notification may be in the form of user trouble call, automated notification to the Contractor from the Contractor's monitoring system or other mechanism.

4.3 User Request Performance Summary

The following chart summarizes the service response level associated with the indicated network service. Full details are provided in the appropriate service section.

Service Name	Type of request	Service Level
Remote Access	New Account	2 business days
IP Address Management	New request, move, deletion	1 business day
POP Servers/User Email	New Account	1 business day
	Password reset	2 business hours
List Service	New list	1 business day
X.500 Directory Service	Email address updates for ERS	1 business day
Usenet News Service	New group	5 business days
Calendar Service	New Account	1 business day
	Password reset	2 business hours
	Group creation	2 business days
Video Service	Request live broadcast	3 business days
	Request archived re-broadcast	3 business days

4.4 Property Management

The Contractor shall work with the appropriate Government property administrator to track all Government infrastructure assets under their control. The Contractor shall e-mail to the Government property administrator any changes to Government asset data within 48 hours of the change occurring. The Contractor shall participate in any inventory surveys of Government equipment under their control and be prepared to verify that equipment exists in its documented location at the Government Owned Facilities.

The Contractor shall maintain accurate, up-to-date records of all assets used in the management and operation of the infrastructure in electronic database or spread sheet format.

This database should consist of Contractor purchased infrastructure equipment, software, and tools whether they are tagged or not. At a minimum, this database should include the make, model, serial number, purchase date, purchase price, installation date, location, responsible person, and anticipated retirement date. This minimum set of information is needed for determining the fair market value of the assets for transition purposes.

All ODIN infrastructure asset information shall be provided to the Government at the commencement of this delivery order in either electronic or hard copy format, at the discretion of the Government. This database of ODIN assets shall be created and maintained using only commercially available software and hardware and shall not require any proprietary vendor software or hardware in any way for full functionality.

The Contractor shall maintain the database or spreadsheet of ODIN assets on a timely basis (i.e., changes are entered into the database within 48 hours of being made) throughout the term of the delivery order and provide updates to the Government upon request of the DOCOTR. The Contractor shall formally deliver a complete copy of the electronic database on the last day of months 6 and 12 of the delivery order, and on the final day of the delivery order.

The electronic database of ODIN assets, associated macros and report definitions shall be the property of the Government to be turned over to the Government upon request and may be used by the Government at the Government's sole discretion for any purpose whatsoever.

The Contractor shall follow existing established Government procedures for excessing equipment. The Contractor shall notify the appropriate Government property custodian when Government equipment is no longer required.

4.5 Reporting

The Government has expanded the requirements for Contractor reporting in terms of asset management, network topology, device configurations and network and server performance. This data is necessary to support enhanced Government oversight and transition planning.

4.5.1 Network Performance

The Contractor shall monitor the network for problems and collect statistics on network devices. Within the capabilities of the equipment, the Contractor shall be capable of collecting and displaying real-time data and providing long-term trend reports for:

- Levels of traffic through every interface, port or segment
- Protocols and their usage distribution at the device and segment level
- Error conditions in specific devices

This data shall be capable of being published in near-real time via world-wide web pages accessible to the entire Center. The DOCOTR may request that certain subsets of this data be made accessible to the entire center, either temporarily or on a permanent basis.

4.5.2 Server Performance

The Contractor shall monitor servers excluding Web1, File1, App1 and Comp1 for problems and collect usage and performance statistics on the servers. At a minimum the following statistics should be collected for all servers:

- Average and peak CPU utilization by day

- Disk usage by week
- Swap utilization by day
- Total active users by month
- Total inactive users by month
- Number of users added or deleted by month

This data shall be capable of being published in near-real time via world-wide web pages accessible to the entire Center. The DOCOTR will be the authority as to what data is made available to the center.

This section is not to be interpreted to imply the development and deployment of an enterprise management system, but rather that the Contractor should have access to the information and use creative mechanisms to perform the requirements listed.

Delivery of requirements in this section shall be completed within 6 months of Delivery Order commencement.

4.5.3 Network Topology

The Contractor shall provide accurate, up-to-date as-built network topology drawings of the GSFC network and environs in both hard copy and electronic format to the Government at the commencement of this delivery order. These network topology drawings shall be rendered and maintained using only commercially available software and hardware and shall not require any proprietary Contractor software or hardware in any way for full functionality.

Both the hard copy and electronic files shall be indexed, filed and labeled in such a way that they can be readily identified and selected by someone unfamiliar with the Contractor's filing system. All network elements shall be documented and labeled such that a technician unfamiliar with the network can find and identify all network elements using only the documentation.

The Contractor shall maintain the network topology drawings on a timely basis throughout the term of the delivery order and provide updates to the Government whenever there is a change in equipment or topology or upon request of the DOCOTR. The Contractor shall formally deliver a complete network topology documentation set on the last day of each quarter, and on the final day of the delivery order.

The Contractor shall also maintain archival versions of the documentation with clearly identified revision dates and numbers. The Contractor shall maintain an index of revision dates and numbers with descriptions of each revision.

Both the hard copy and electronic format versions of the network topology drawings are and shall remain the property of the Government to be turned over to the Government upon request of the DOCOTR and may be used at the Government's sole discretion for any purpose whatsoever.

4.5.4 Device Configurations

The Contractor shall maintain an accurate, up-to-date backup of network device configuration files. The Contractor shall maintain the repository of network device configuration files on a timely basis (i.e., changes are entered into the database within 48 hours of being made) throughout the term of the delivery order and provide updates to the Government upon request of the DOCOTR.

This repository of network device configuration files shall be maintained using only commercially available software and hardware and shall not require any proprietary Contractor software or hardware in any way for full functionality. Backups shall be archived for not less than one year.

The Contractor shall participate in any surveys of network equipment operated and maintained by ODIN to verify its configuration.

The archive of network device configurations shall be the property of the Government to be turned over to the Government upon request and may be used by the Government at the Government's sole discretion for any purpose whatsoever.

4.6 Maintenance

In order to conduct planned, routine maintenance, installations, upgrades or other work that will impact on end-user services, the Contractor shall schedule Maintenance Periods. Properly scheduled and announced, the maintenance periods do not count as outages.

Under normal conditions, maintenance periods shall be announced three full business days prior to the activity. A reminder notice shall be distributed one full day prior to the activity.

Maintenance announcements must be posted via the following mechanisms:

Location	Impact Level	Announcement Type
CNE/ODIN web site	All	Full
cne-alert mailing list	All	Full
Dateline	Level 1 and 2	Brief
Voicemail	Level 1	Brief
FOM mailing list	All	Full
Goddard TV Channel 6	Level 1	Full
GSFC Usenet Groups	Level 1 and 2	Brief
ODIN Vendor help line	Level 1 and 2	Brief

Full maintenance announcements must contain the following minimum information:

- Scheduled maintenance period (specified in EDT or EST)
- Reason for maintenance activity
- Explanation of potential impact on user community
- Other systems and services that may be affected
- A POC for more information or to request a deferment

Brief announcements should contain scheduled maintenance period and brief description, and may include a reference to source for full announcement.

Exceptions to normal scheduling and announcing of maintenance periods may be made at the approval of the DOCOTR.

4.7 Documentation

The Contractor shall provide a web site (known as the CNE web site) to advertise and explain all infrastructure and back-office/enterprise related services, and aggregate all infrastructure and

back-office services applications, help and change mechanisms into this single portal. This portal (web site) shall only be available to hosts in *.nasa.gov domain and shall remain in the *.gsfc.nasa.gov domain on Center. The Contractor shall follow all applicable Federal, NASA and GSFC web policies.

4.8 Network Performance Standards

The network infrastructure shall support, as a minimum, the following protocols TCP/IP, Decnet, IPX, SPX, Appletalk, RIP, OSPF and BGP.

The network infrastructure, including the building, backbone and WAN/MAN architecture, shall meet the following performance levels, within the limitations of the Government-provided equipment.

- Backbone capacity at less than 85% average during core hours
- Network segment (building and floor) at less than 75% average during core hours
- Latency (ping time) from any single host to any other single host shall not exceed the following times for a 100-packet 128-byte sample
    - 100 Mbps ⇔ 100 Mbps switched: 8 ms
    - 10 Mbps ⇔ 10/100 Mbps switched: 10 ms
    - 10 Mbps ⇔ 10 Mbps shared: 14 ms
- Average throughput for file transfers, using a 100 MB file transfer sample, shall meet the following minimum rates
    - 100 Mbps ⇔ 100 Mbps switched: 20 Mbps
    - 10 Mbps ⇔ 10/100 Mbps switched: 2 Mbps
    - 10 Mbps ⇔ 10 Mbps shared: 0.2 Mbps

In the event the core network infrastructure fails to meet these requirements on a daily basis, the Contractor shall inform the Government and make recommendations for corrective action needed to allow the core network infrastructure to meet the standards.

4.9 Operations and Maintenance

Maintenance of the network equipment, including hardware maintenance and/or sparing, shall be performed in a manner consistent to maintain the performance requirements as defined in this document.

The Contractor shall install firmware and software upgrades in equipment deployed in the network infrastructure at the request or approval of the DOCOTR. The Contractor shall perform preventive maintenance of all network devices as specified by the device manufacturer but not less than once a year. All replaced network equipment shall meet or exceed the performance requirements and specifications of the existing network equipment and such an upgrade will not be considered an infrastructure upgrade. Approval of the DOCOTR is required when the replaced network equipment is of a different make or model than that being replaced. The DOCOTR may pre-approve network equipment as part of the maintenance strategy.

The Contractor will audit the existing usage of the installed network equipment to determine if the ports are active and being utilized prior to recommending any upgrade to the network infrastructure.

In the sections that follow, the Government has defined specific performance criteria that must be met for the enterprise/back-office services in order for the service to be considered "available". At any time when those performance criteria are not met, the service is considered to be "unavailable" and beyond the return to service times specified in Section 4.2, the Government shall be entitled to outage credits. Outage credits shall be computed according to the ODIN Master Contract, with specific reference to Sections F.1.1.2 Availability Metric, F.2 Metric Terms and Attachment A List of Acronyms and Definitions.

4.14.1 General Enterprise/Back-Office Service Policies

The following guidelines and polices shall apply to all Enterprise/Back-Office Services:

The Contractor shall perform continuous monitoring of all Enterprise/Back-Office Services and shall make available web-based monitoring data of Enterprise/Back-Office Services servers and critical processes. Access to the monitoring data pages shall be restricted to the DOCOTR.

Enterprise/Back-Office Services shall, at a minimum, be available 98% of Core Business Hours, unless specified differently in the appropriate specific Enterprise/Back-Office Service section. Outage duration hours shall be maintained as a running total on a monthly basis as contract evaluation criteria. The Contractor shall be eligible for incentive award based on availability 99% or greater during Core Business Hours.

Servers providing Enterprise/Back-Office services shall have verbose logging enabled, unless specified differently in the appropriate specific Enterprise Service section. Unless otherwise specified, logs shall be maintained 30 days.

Operating system and application patches shall be kept up to date (within 24 hours for those rated High Priority by NASIRC and 48 hours for Medium Priority of patch release for security exploits, and within 2 months or as-needed for all other patches) for servers and systems providing Enterprise/Back-Office Services.

All non-seat services shall be disabled on all systems supporting Enterprise/Back-Office services.

Mail queues shall be processed on all systems, even if the systems are not functioning as mail servers.

All systems shall be accessed via ssh rather than via telnet, rsh, rlogin, or FTP, wherever possible.

All external services shall comply with the NASA Export Control policies. All passwords shall comply with the rules established in NPG2810 and as established by the Contractor, shall be different for every user, within the capabilities of the system .

All Contractor-operated systems shall comply with the rules established in NPG2810, including NASA Warning Security Banners.

4.14.2 DNS

The Domain Name System (DNS) service provides for the mapping between computer names and IP addresses. Since the DNS service is used extensively in the performance of all other

network services, it is a critical element in the successful operation of the network and infrastructure.

DNS Servers perform one or more of the following functions:

- Host the *master* local name and IP address for a given node. Other servers approved by the DOCOTR can obtain copies of local data via *zone transfers*
- Answer queries about local name or IP data for a given node based on data obtained from master server via zone transfer. A server with such data is considered *authoritative*
- Answer local queries about remote name and IP data. The local DNS server acts as a *proxy* to hunt for an authoritative DNS server to obtain the information.

4.14.2.1 DNS Service Levels

The DNS Service, as a minimum, shall meet the following service levels:

- An authoritative and proxy DNS server shall be available at all times
- Server shall respond to local request for local name or IP data within 1.0 seconds
- Server shall respond to requests for non-cached remote names within 2.0 seconds
- Server shall support all GSFC IP addresses

4.14.2.2 DNS Policies

The following policies, as a minimum, shall apply to the DNS service:

- Master data shall be updated, as a minimum, twice daily at regularly scheduled times
- No server shall allow zone transfers of its authoritative data without approval of the DOCOTR
- No server shall accept update requests without approval of the DOCOTR
- Contractor shall verify data is authoritative upon completion of master data reload

4.14.2.3 DNS Logs and Statistics

The Contractor shall maintain logs from which the following can be derived upon request:
- Server status, including authoritative status
- Security monitoring, including unauthorized queries and update attempts

All security logs shall be maintained for a minimum of one year.

4.14.2.4 DNS Reports

The Contractor shall provide reports derived from the data collected in Section 4.14.2.3 upon request of the DOCOTR, on an as-needed basis. Reports shall be provided either electronically or hard-copy at the discretion of the DOCOTR.

4.14.3 POP Servers/User Email

The Electronic Mail (Email) service utilizes servers to provide GSFC and WFF users the means of moving electronic mail between servers and desktops, both local and remote.

Availability Performance Criteria #1: Mail delivery between users on different ODIN-supported mail servers occurs in less than 5 minutes. When this metric is not met, all ODIN Tech-Refresh and NAD customers on the systems involved will be considered "down".

4.14.3.1 E-mail Service Levels

The Email server shall, as a minimum, meet the following service levels:

- Support Simple Mail Transfer Protocol (SMTP) and Extended Simple Mail Transfer Protocol (ESMTP) to allow mail transfer between servers and from desktops to servers
- Support Post Office Protocol, version 3 (POP-3) to allow desktops to download from mail servers, and APOP for security as appropriate
- Support telnet and ssh to allow direct login and mail access via terminal window
- Implement rules to eliminate incoming and outgoing "SPAM" messages
- Support a means of preventing email viruses from entering and circulating the GSFC environment via the ODIN email infrastructure. Incoming email shall be scanned for viruses and virus signatures removed before delivery to the end user's computer without incurring more than a 30 minute delay in the delivery of the message. Viruses in outgoing email sent through the ODIN email infrastructure shall be identified and eradicated prior to the message leaving the ODIN email infrastructure, incurring no more than a 30 minute delay in the attempted delivery of the message.
- Creation of new electronic mail accounts shall occur within 1 business day of request
- Password resets shall occur within 2 business hours of the request and verification

4.14.3.2 Mail Drop Service

In conjunction with the email system, the Contractor shall provide a web based, password protected mail drop service where users can leave large attachments to be picked up by recipients.

The mail drop service shall support the following features:

- The service shall have a scaleable design such that the hardware and software can be adapted as user requirements and policies evolve.
- Support the uploading of up to (3) files at a time.
- The web based mail drop browse button shall activate Microsoft Windows Explorer or equivalent in other operating systems on the desktop computer for file selection. Browse feature shall support (at a minimum) PC, Mac, Linux, and Solaris.
- Support the capability to assign a unique username/password for each file.
- Provide an upload confirmation window.
- Support SSL service on the server if needed.
- The web based user interface shall display the file name, date and file size.

4.14.3.3 Email Policies

The following policies, as a minimum, shall apply to the Email service:

- All on-site GSFC and WFF users, and off-site civil servants are authorized to obtain Email accounts
- Contractor shall delete accounts that have been inactive 120 days
- Accounts shall be deleted by the Contractor within 30 days of separation of account user

- Contractor shall verify account status at least 30 days prior to account deletion
- Contractor shall restrict access to POP-3, telnet and ssh to local GSFC and WFF address space
- Maximum message size for both transit and storage shall be established by GSFC Postmaster
- Mail relay shall be restricted to local GSFC and WFF address space

4.14.3.4 Email Logs and Statistics

The Contractor shall maintain logs from which the following can be derived upon request:

- Number of active user accounts total mailbox size and connections
- Number of messages, message sizes (sent, received, stored, downloaded)
- Number of users who login remotely
- Security monitoring, including unsuccessful login attempts and unauthorized mail relay

All security logs and statistics shall be maintained for a minimum period of one year

4.14.3.5 Email Reports

The Contractor shall provide reports derived from the data collected in Section 4.14.3.4 upon request of the DOCOTR, on an as-needed basis. Reports shall be provided either electronically or hard-copy at the discretion of the DOCOTR.

4.14.4 Email List Service

The Email List Service provides for electronic mail distribution lists allowing electronic mail to be sent to multiple users through the use of a single email address.

Availability Performance Criteria #1: Complete delivery of sample message to every local list member of an established list within 10 minutes for lists with fewer than 100 members.
Availability Performance Criteria #2: Complete response to help list command within 10 minutes

4.14.4.1 Email List Service Levels

The List Service shall support, as a minimum, the following service levels:

- Contractor shall support list management both via email and web interfaces
- New lists shall be established within one business day of the request

4.14.4.2 Email List Service Policies

The following policies as a minimum shall apply to the List Service:

- All lists shall have passwords known only to the list owner and the list owner shall have the capability to modify the parameters of the list
- All lists shall require subscription confirmation
- New lists shall be established with list message size maximum of 80,000 characters unless approved by the Government
- Contractor shall delete mailing lists that have not been utilized within one year
- Contractor shall delete mailing lists that are empty

- Contractor shall verify list deletions with list owner at least 30 days prior to deletion
- Contractor shall verify list owners against X.500 Directory System every 6 months, resolve discrepancies and report any unresolved discrepancies to the DOCOTR

4.14.4.3 Email List Service Logs and Statistics

The Contractor shall maintain logs from which the following can be derived upon request:

- Subscriber modification
- Security monitoring, including unapproved subscription or modification attempts

All security logs and statistics shall be maintained for a minimum period of one year

4.14.4.4 Email List Service Reports

The Contractor shall provide reports derived from the data collected in Section 4.14.4.3 upon request of the DOCOTR, on an as-needed basis. Reports shall be provided either electronically or hard-copy at the discretion of the DOCOTR.

4.14.5 X.500 Directory Service

The service provides the Center standards-based Directory service and electronic mail address translation capability.

Availability Performance Criteria #1: The system shall process valid local queries and return full response within 5 seconds

Availability Performance Criteria #2: The system shall support email delivery through the ERS and between users on different ODIN-supported mail servers in less than 5 minutes

4.14.5.1 X.500 Directory Service Levels

The X.500 Directory Service shall support, at a minimum, the following service levels:

- Standards as defined in the most recent approved version of NPG 2807 and NPG 2815
- LDAP-enabled version of fingered and ph to perform lookups in X.500
- Email Reflector System (ERS), a customized version of sendmail, which translates and delivers email addressed using a variation of the defined ERS address to the actual email address
- Public Key Infrastructure (PKI) extensions in support of the NASA PKI Initiative
- Contractor shall process email address updates for ERS within one business day of the request. Requests shall be submitted through the IntelliCenter

4.14.5.2 X.500 Directory Service Policies

The following policies, as a minimum, shall apply to the X.500 Directory Service:

- Entries shall be deleted within one month of separation.
- ERS email addresses shall be only *.nasa.gov or local Contractor addresses, unless approved by the Government
- Entries shall be updated weekly, based on the information from the GSFC LISTS/Locator system. There presently exists a Government provided database system that enables multiple data sources to be synthesized in such a way as to maintain compliance with CIO

standards. The Contractor may use this system or any other system that implements the same naming and archiving guidelines.
- Updates shall be done in compliance with PKI guidelines

4.14.5.3 X.500 Directory Service Logs and Statistics

The Contractor shall maintain logs from which the following can be derived upon request:

- Total number of X.500 Directory entries
- Security monitoring, including invalid modification attempts and access attempts

All security logs and statistics shall be maintained for a minimum period of one year.

4.14.5.4 X.500 Directory Service Reports

The Contractor shall provide reports derived from the data collected in Section 4.14.5.3 upon request of the DOCOTR, on an as-needed basis. Reports shall be provided either electronically or hard-copy at the discretion of the DOCOTR.

Reports shall be provided either electronically or hard-copy at the discretion of the Government.

4.14.6 Usenet News Service

The Usenet News service provides for a distributed discussion system supporting the users of the GNE.

4.14.6.1 Usenet News Service Levels

The following service levels shall apply, as a minimum, to the Usenet News Service:

- System shall support the Network News Transfer Protocol (NNTP)
- Processor utilization shall not exceed 85% on a daily average
- Spool partition usage shall not exceed 65% on a daily average
- New newsgroups shall be established within 5 business days of Government approval
- The Contractor shall maintain an active newsfeed to the Center

4.14.6.2 Usenet News Policies

The following policies, as a minimum, shall apply to the Usenet News Service:

- Access shall be restricted to GSFC and WFF domains and approved off-site news peers
- Creation, deletion or changes to newsgroups shall require the approval of the DOCOTR
- Addition, deletion or changes to newsfeed peering agreements shall require DOCOTR approval
- Minimum expiration time for all non- GSFC or NASA newsgroups shall be 14 days
- Minimum expiration time for all GSFC and NASA newsgroups shall be 45 days
- Organization, NNTP-Posting-User and NNTP-Posting-Host headers shall be included in every outgoing post

4.14.6.3 Usenet News Logs and Statistics

The Contractor shall maintain logs from which the following can be derived upon request .

- CPU utilization, spool partition usage and swap times
- Spool Access times, article write times and history lookup times
- Incoming and Outgoing article statistics for each feed
- Server (incoming and outgoing) and client connection statistics via TCP wrapper logs
- Per newsgroup readership statistics
- Bad article/unwanted newsgroup statistics from incoming feeds
- NNRP explorer and no permission clients statistics

All security logs and statistics shall be maintained for a minimum period of one year.

4.14.6.4 Usenet News Reports

The Contractor shall provide reports derived from the data collected in Section 4.14.6.3 upon request of the DOCOTR, on an as-needed basis. Reports shall be provided either electronically or hard-copy at the discretion of the DOCOTR.

4.14.7 Electronic Mail Relay Service (Mailhost)

The Electronic Mail (Email) Relay Service provides smart host email relay to GSFC and WFF mail servers.

Availability Performance Criteria: System shall accept and begin processing of mail within 5 minutes of initial connection request

4.14.7.1 Electronic Mail Relay Service Levels

The Email Relay Service, shall, as a minimum, support the following service levels:

- Support Simple Mail Transfer Protocol (SMTP) and Extended Simple Mail Transfer Protocol (ESMTP)
- Implement rules to eliminate incoming and outgoing "SPAM" messages

4.14.7.2 Electronic Mail Relay Service Policies

The following policies shall, at a minimum, apply to the Email Relay Service:

- System shall accept mail relay only from the GSFC and WFF domains
- System shall retain for 4 days messages that are undeliverable due to system or network unavailability

4.14.7.3 Electronic Mail Relay Service Logs and Statistics

The Contractor shall maintain logs from which the following can be derived upon request:

- Total number and bytes of mail relay processed
- System abuse, including unauthorized mail relay requests

All security logs and statistics shall be maintained for at least one year.

4.14.7.4 Electronic Mail Relay Service Reports

The Contractor shall provide reports derived from the data collected in Section 4.14.7.3 upon request of the DOCOTR, on an as-needed basis. Reports shall be provided either electronically or hard-copy at the discretion of the DOCOTR.

4.14.8 Time Service

The Network Time Service provides a common clock reference for the synchronization of system clock. A common use of such synchronization is the generation of timestamps in system logs as an aid to troubleshooting and security.

Availability Performance Criteria: System shall maintain a response time to a client query of less than 5 seconds

4.14.8.1 Time Service Levels

The Network Time Service shall, as a minimum, support the following service levels:

- Support standard synchronization standards, including Network Time Protocol (NTP, RFC 1305), Simple Network Time Protocol (SNTP, RFC 2030), Time Protocol (RFC 868) and ICMP Timestamps
- Contractor shall maintain no less than two geographically diverse Network Time servers to support the service
- System shall maintain a time difference between the actual Universal Time Coordinated (UTC) and the reported time on the time servers of less than 0.5 seconds

4.14.8.2 Time Service Policies

The following policies shall apply, as a minimum, to the Network Time Service:

- Contractor shall maintain constant synchronization between at least one time server and the Government provided antenna and radio clock system
- Contractor shall maintain constant synchronization between Center time servers both with each other and with at least three reliable peering time sources, including one non-NASA source. The DOCOTR must approve all peering time sources utilized.
- Contractor shall permit only hosts within the GSFC and WFF domains to synchronize as a client with the Center time servers
- Contractor shall ensure synchronization of all ODIN managed servers and core network infrastructure devices with the Center time servers daily

4.14.8.3 Time Service Logs and Statistics

The Contractor shall maintain logs from which the following can be derived upon request :

- Status of peers
- Time Server Availability

All security logs and statistics shall be maintained for a minimum period of one year.

4.14.8.4 Time Service Reports

The Contractor shall provide reports derived from the data collected in Section 4.14.8.3 upon request of the DOCOTR, on an as-needed basis. Reports shall be provided either electronically or hard-copy at the discretion of the DOCOTR.

4.14.9 Calendar Service

The Calendar service provides electronic calendaring service for GSFC and WFF users.

Availability Performance Metric: A scheduling request from a single user to another single user shall be processed within 5 minutes

4.14.9.1 Calendar Service Levels

The Calendar service shall meet, as a minimum, the following service levels:

- Support for multiple platforms, including Windows, Macintosh and Unix
- Integrated SMTP and POP mail capability with email notifications
- Support for LDAP
- Support for a web interface, to allow user access even without client software
- Support synchronization with Palm PDA devices

4.14.9.2 Calendar Service User Classes

The calendar service shall support, as a minimum, the following user classes:

- Standard user account shall allow a user to modify only his/her own calendar and view those calendars that he/she has been granted access to
- Proxy user account shall allow a user to modify his/her own calendar and those user calendars that he/she has been granted permission to modify

4.14.9.3 Calendar Service Policies

The following policies, as a minimum, shall apply to the calendar service.

- Access shall be controlled by user name and password within the capabilities of the system
- New user accounts shall be activated within 2 business days of request
- New groups shall be created within one business day
- Password changes shall be implemented within 4 business hours
- Calendar data shall be maintained for a minimum period of one year
- Contractor shall delete accounts that have been inactive for 120 days or within one month of separation
- Contractor shall verify account status at least 30 days prior to account deletion

4.14.9.4 Calendar Service Logs and Statistics

The Contractor shall maintain logs from which the following can be derived upon request:

- Number of accounts
- Accounts with last login date information
- MM Availability
- Security monitoring, including unsuccessful login attempts and unapproved modification attempts

All security logs and statistics shall be maintained for a minimum period of one year

4.14.9.5 Calendar Service Reports

The Contractor shall provide reports derived from the data collected in Section 4.14.9.4 upon request of the DOCOTR, on an as-needed basis. Reports shall be provided either electronically or hard-copy at the discretion of the DOCOTR.

4.14.10 Network Video Services

The Center's Network Video Services include both an M-Bone server and a streaming video server for both real-time and on-demand broadcast.

4.14.10.1 Network Video Service Levels

The Network Video Services shall, as a minimum, meet the following service levels.

- Maintain a streaming multimedia content server for GSFC and WFF domains
- Support, as a minimum, Realmedia streaming and video on-demand. Other formats (Windows Media and Quicktime) are considered desirable
- Support multi-casting on multimedia content server and multi-cast capable routers in the GSFC and WFF domains
- Support a minimum of 100 simultaneous users each with a minimum rate of 384 Kbps
- Maintain an M-Bone server, a host configured with mrouted, connected to a multicast enabled network.

4.14.10.2 Network Video Service Policies

The following policies, as a minimum, shall apply to the Network Video Services:

- Access to the servers shall be restricted to the GSFC and WFF domains
- Media placed or broadcast on the servers shall require approval of the DOCOTR
- Multicasting shall be enabled on multicast capable portions of the network with prior concurrence of the DOCOTR.
- Requests for broadcast of live events shall be processed within 3 business days
- Requests for broadcast of archived events shall be processed within 2 business days

4.14.10.3 Network Video Service Logs and Statistics

The Contractor shall maintain logs from which the following can be derived upon request:

For live streaming events
- Number of connections, download rate and simultaneous users
- Peak number of viewers per event
- Peak bandwidth utilized per event
- For on-demand applications
- Number of users per application
- Peak bandwidth utilized

All security logs and statistics shall be maintained for a minimum of one year.

4.14.10.4 Network Video Service Reports

The Contractor shall provide reports derived from the data collected in Section 4.14.10.3 upon request of the DOCOTR, on an as-needed basis. Reports shall be provided either electronically or hard-copy at the discretion of the DOCOTR.

4.14.11 Anonymous FTP

The anonymous File Transfer Protocol (FTP) services provides for internal and external file transfer for GSFC. Software made available through the internal ftp site should include Eudora, Netscape, McAfee, Entrust and other site licensed software. Contractor should keep this site and these products updated and current. Total available space at a minimum should be 4GB for the internal FTP and 2 GB minimum for external ftp.

4.14.11.1 Anonymous FTP Service Levels

The anonymous FTP service shall support two service levels:

- Internal file service shall be available to only the GSFC and WFF domains, primarily to support software site licenses; and
- External file service shall allow GSFC to make files available to the general public

4.14.11.2 Anonymous FTP Policies

The following policies, as a minimum, shall apply to the anonymous FTP services:

- Internal file service shall be accessible only by GSFC and WFF domains
- Files shall only be uploaded with the approval of the DOCOTR
- No commercial software shall be placed on external file service

4.14.11.3 Anonymous FTP Logs and Statistics

The Contractor shall maintain logs from which the following can be derived upon request:

- Number of files and bytes downloaded
- Hosts downloading, both files and bytes

All security logs and statistics shall be maintained for a minimum of one year.

4.14.11.4 Anonymous FTP Reports

The Contractor shall provide reports derived from the data collected in Section 4.14.11.3 upon request of the DOCOTR, on an as-needed basis. Reports shall be provided either electronically or hard-copy at the discretion of the DOCOTR.

5.0 INFORMATION TECHNOLOGY SECURITY (To be unbundled from LAN, NAD and Tech Refresh Seats and priced as a lump sum firm fixed price per month under "SuperNAD (SNAD).")

5.1 General

This Contract is subject to the requirements of NPG 2810. All systems and services deployed by the Contractor must be in compliance with NPG 2810, except where risk is accepted by the DOCOTR.

The Contractor must develop and submit an IT Security Plan.

5.2 Governance

IT security issues for the infrastructure will be worked through the DOCOTR as described in Section 4.1. IT security issues for desktop related issues will be worked through the ODIN IT Security POC and all activities will be coordinated with the Enterprise IT Security Branch (Code 297).

5.3 Infrastructure

The Contractor shall work through the DOCOTR and related bodies to implement and maintain firewalls and other devices designed to protect the infrastructure or detect, characterize and analyze security incidents.

5.3.1 Quarterly Scanning

The Contractor shall perform quarterly scanning of all address spaces associated with the CNE network. The scanning shall include the following range of addresses at a minimum:

- 128.183.xx.xx (CNE Class B network)
- 128.154.xx.xx (WFF Class B network)
- 198.116.29.xx (GISS for ODIN seats only
- 194.42.70.xx (GISS) for ODIN seats only

The quarterly scans shall be coordinated with the GSFC C-ITSM and with NASIRC, such that those individuals/organizations will be aware in what time frame what address spaces are being scanned. Scanning shall be based on the NASA 60 scan rules, which will be updated every quarter by Code 297.

The Contractor shall submit the scanning results in soft copy to the Government, in a standard data format. The Contractor shall develop quarterly trend reports on the vulnerabilities

identified, and submit graphs of the trends to the Government. The scanning results data shall be maintained for a minimum of one year.

5.3.2 Scanning of Compromised Systems

The Contractor shall perform a full security scan of any ODIN-managed seat that is compromised. The range of addresses subject to this requirement are the same as in Section 5.3.1. The Contractor shall provide the scanning results to Code 297 in a standard data format. The scanning results shall be maintained for a minimum of one year.

5.3.3 Scanning and Securing of Infrastructure and Back-Office Systems

The Contractor shall perform a full security scan on any new system that will provide an infrastructure or back-office service before it is deployed in the network. This includes but is not limited to network management systems, email servers, DNS, web servers, calendar servers. All vulnerabilities shall be remediated before the system is deployed in the network. Further, the Contractor shall perform a full security scan of all systems actively deployed in the network performing infrastructure and back office services on a quarterly basis, and remediate all vulnerabilities within 10 business days of notification/awareness of the vulnerability. These systems are deemed to be at increased risk due to their visibility, and are of great importance to the Government in accomplishing the Center's mission. Further, any security vulnerabilities or patches announced between instances of scanning shall be applied to infrastructure and back-office systems within 10 business days of notification/awareness.

5.3.4 Access Control Lists

The Contractor shall work with the C-ITSM/CSO and other Government officials to maintain the necessary set of access control lists in firewalls, switches, routers, systems and other network devices.

5.4 Desktops

The Contractor shall support vulnerability scanning efforts to identify the vulnerabilities defined in the NASA Top 50 on behalf of ODIN tech refresh seats and any systems for which ODIN has systems administration responsibility. The Contractor is responsible for remediating any vulnerabilities identified, tracking vulnerabilities and fixes and reporting the statistics to the ODIN IT Security POC. The Contractor shall define a process to work with DOCOTR to obtain scanning outputs for ODIN desktops, schedule and remediate vulnerabilities, track the changes and communicate the status with the Directorate CSO.

6.0 Data Requirement Description (DRD)

The following DRDs are in addition to those described in Contract Attachment B Data Requirement Description.

APPENDIX A

CHANGES TO ATTACHMENT E

SEAT TYPES	GP2	GP3	SE1	SE2	SE3	MA1	MA2	NAD	LAN C	LAN B	LAN A	PDA 1	PDA 2						
LAN Services																			
No ODIN supplied network connection	O	O	O	O	O	O	O	O											
Standalone	O	O	O	O	O	S	S												
Remote-S LAN access	O	S	O	O	O			O											
Remote-W LAN access	O	O	O	O	O			O											
Basic access	S	S	S	S	S			S	S	S	S								
LAN Interface Service																			
Restore to service																			
Basic																			
Regular																			
Premium										S	S								
Enhanced										O	O								
Critical										O	O								
Integrated Customer Support/Help																			
Basic																			
Regular																			
Enhanced	S	S	S	S	S	S	S	S	S			S	S						
Training																			
None	S	S	S	S	S	S	S	S	S										
Basic	O	O	O	O	O			O											
System Administration																			
Basic			O	O	O	S	S	S	S			S	S						
Regular	S	S	S	S	S	O	O	O											
Enhanced	O	O	O	O	O			O											
Shared Peripheral Services																			
None	O	O	O	O	O	S	S	S	S										
Basic	S	S	S	S	S			O											
Regular	O	O	O	O	O			O											
Enhanced	O	O	O	O	O			O											
File services																			
None	S	S	S	S	S	S	S	S	S										
Basic	O	O	O	O	O			O											
Regular	O	O	O	O	O			O											
Enhanced	O	O	O	O	O			O											

APPENDIX A

Table E.2.1.1 Desktop Seats

SEAT TYPES	GP2	GP3	SE1	SE2	SE3	MA1	MA2	NAD	LAN C	LAN B	LAN A	PDA 1	PDA 2						
System Provision:																			
Platform																			
None						S	S	S	S										
PC/Mac desktops																			
Entry-level																			
Mid-level	S		O																
High-end			S	O															
Laptops																			
Entry-level																			
Mid-level		S																	
High-end		O	O																
Unix desktop																			
Entry-level			O																
Mid-level				S															
High-end					S														
PDA																			
Mid												S							
High													S						
Architecture (Unix only)																			
ODIN Default			S	S	S														
DEC			O	O	O														
HP			O	O	O														
IBM			O	O	O														
SGI			O	O	O														
SUN			O	O	O														
ODIN Application Software																			
None	O	O	O	S	S	S	S	S	S										
Standard Application Software Suite	S	S	S	O	O			O											
Services:																			
Hardware Maintenance																			
None								S											
Basic - 3 Days																			
Regular - CONB																			
Premium - 8	S	S	S	S	S	S	S	O	O			S	S						

SEAT TYPES	GP2	GP3	SE1	SE2	SE3	MA1	MA2	NAC	LAN C	LAN B	LAN A	PDA 1	PDA 2						
work hours																			
Enhanced - 4 work hours	O	O	O	O	O	O	O	O	O			O	O						
Critical	O	O	O	O	O	O	O	O	O			O	O						
System Software Maintenance																			
None								S	S										
Basic																			
Regular - CONB																			
Premium – 8 work hours	S	S	S	S	S	S	S					S	S						
Enhanced - 4 work hours	O	O	O	O	O	O	O	O				O	O						
Critical - 2 contiguous hours	O	O	O	O	O	O	O	O				O	O						
ODIN-Appl Software Maintenance																			
None			O	S	S	S	S	S	S										
Basic																			
Regular - CONB																			
Premium – 8 Work hours	S	S	S	O	O			O											
Enhanced - 4 work hours	O	O	O	O	O			O											
Critical - 2 Contiguous hours	O	O	O	O	O			O											
Hardware Tech Refresh																			
Basic 5 years	O	O	O	O	O							O	O						
Regular 4 years	O	O	O	O	O							O	O						
Premium 3 years	S	S	S	S	S							S	S						
Enhanced 18 months	O	O	O	O	O							O	O						
Software Tech Refresh																			
Regular	S	S	S	S	S							S	S						
Enhanced	O	O	O	O	O							O	O						
Moves, Adds, Changes																			
Regular	S	S	S	S	S	S	S	S	S	S	S	S	S						
Enhanced	O	O	O	O	O	O	O	O	O	O	O	O	O						

SEAT TYPES	GP2	GP3	SE1	SE2	SE3	MA1	MA2	NAD	LAN C	LAN B	LAN A	PDA 1	PDA 2						
Local Data Backup and Restore Services																			
None	S	S	S	S	S	S	S	S											
Basic - weekly incremental of one data and one email directory defined by Contractor	O	O	O	O	O			O											
Regular - weekly incremental of entire disk	O	O	O	O	O			O											
Enhanced entire disk daily (incremental)	O	O	O	O	O			O											
Peripheral Maintenance																			
None	O	O	O	O	O			S											
Basic – defined existing Government owned peripherals	S	S	S	S	S			O											
Laptop Loaner Pool Management																			
None		S	S																
Basic		O	O																
Light Weight Laptop		O	O																
Docking Station		O	O																
Printer User Configuration																			
Basic																			
Regular																			
Premium																			
Enhanced																			

APPENDIX B

GSFC ODIN CORE AND STANDARD SOFTWARE LOADS

Appendix B

GSFC ODIN

CORE LOAD

These products receive full ODIN support as **Triage Level 1** software.

COMPONENT	PC PRODUCT	MAC PRODUCT
Operating System	MS Windows 2000	Mac OS 10
Office Suite	MS Office 2000 Professional (Word, Excel, PowerPoint, Access, Outlook)	MS Office 2000 Professional (Word, Excel, PowerPoint, Access, Outlook)
Browser – Default	Netscape Communicator	Netscape Communicator
Browser – Alternate	Internet Explorer	Internet Explorer
Anti-Virus	McAfee Virus Scan	McAfee Virex
Electronic Mail	Eudora Pro	Eudora Pro
TCP/IP Stack Bundled	Windows 2000	Open Transport
PDF Generator/Viewer	Adobe Acrobat (Reader)	Adobe Acrobat (Reader)
Browser Plug-ins	Installed as applicable for all ODIN-supported bundled products Macromedia Flash	Installed as applicable for all ODIN-supported bundled products Macromedia Flash
Laptop Security	Computrace	TBD
ODIN Administration	Asset Insight	Asset Insight

These products receive full ODIN support as **Triage Level 1** software.

COMPONENT	PC PRODUCT	MAC PRODUCT
Calendaring/Scheduling	Meeting Maker *	Meeting Maker *
Media Player	Real Player	Real Player
Movie Viewer	Quick Time	Quick Time
FTP Client	Ws-FPT	Fetch
3270 Client	QWS3270	TN3270
Extractor	Winzip	Stuffit Expander

* NON-CATALOG MEETING MAKER USERS ARE CAPPED AT 2,300 USERS THAT ARE TO BE DETERMINED BY THE GOVERNMENT.

TRIAGE LEVEL 2 SOFTWARE LIST

ODIN will install and uninstall. Support provided in conjunction with a Government POC.

COMPONENT	PC PRODUCT	MAC PRODUCT
Public Key Infrastructure	Entrust	Entrust
X Window System Server	Exceed	Exodus
PostScript Interpreter	GhostScript	MacGS
Financial Management	IFM - Citrix	IFM - Citrix
Travel	Travel Manager	Travel Manager
Timecards	OMNI	OMNI
Property Administration	CHIRPS	CHIRPS
	Manpower Tracking System	Manpower Tracking System
EID/Adhoc Reporting	Brio	Brio

NOTE: For all other software residing on an ODIN seat, if the user has the license, the Contractor shall reinstall the software on the new computer and make a reasonable attempt to make the software work on the new computer.